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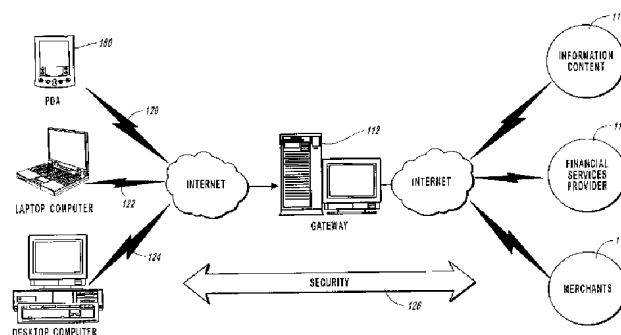
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(54) PROCEDES ET SYSTEMES DE COMPTABILISATION FONDEE SUR LE TRAVAIL

(54) METHODS AND SYSTEMS FOR JOB-BASED ACCOUNTING

(57)

The present invention relates to an automated, mobile method for remotely managing personal or job-based resources through real-time allocation of the resources among a set of user-defined virtual spending accounts. One method enables the user to establish a single layer of virtual accounts for persona. Another method provides multiple layers of virtual accounts for business use such as having one layer that comprises job accounts representing individual jobs or projects and another layer that comprises allocation accounts representing categories of transactions such as "materials", "labor", "facilities", and "insurance". The user uses these virtual accounts in conjunction with actual accounts to track the user's transactions in real time. The user may also use the present invention to create and remotely transmit financial information such as purchase orders and invoices, keep a record of employees, enter employee time sheets, process payroll, and allocate and reconcile incoming and outgoing transactions between the various virtual accounts.





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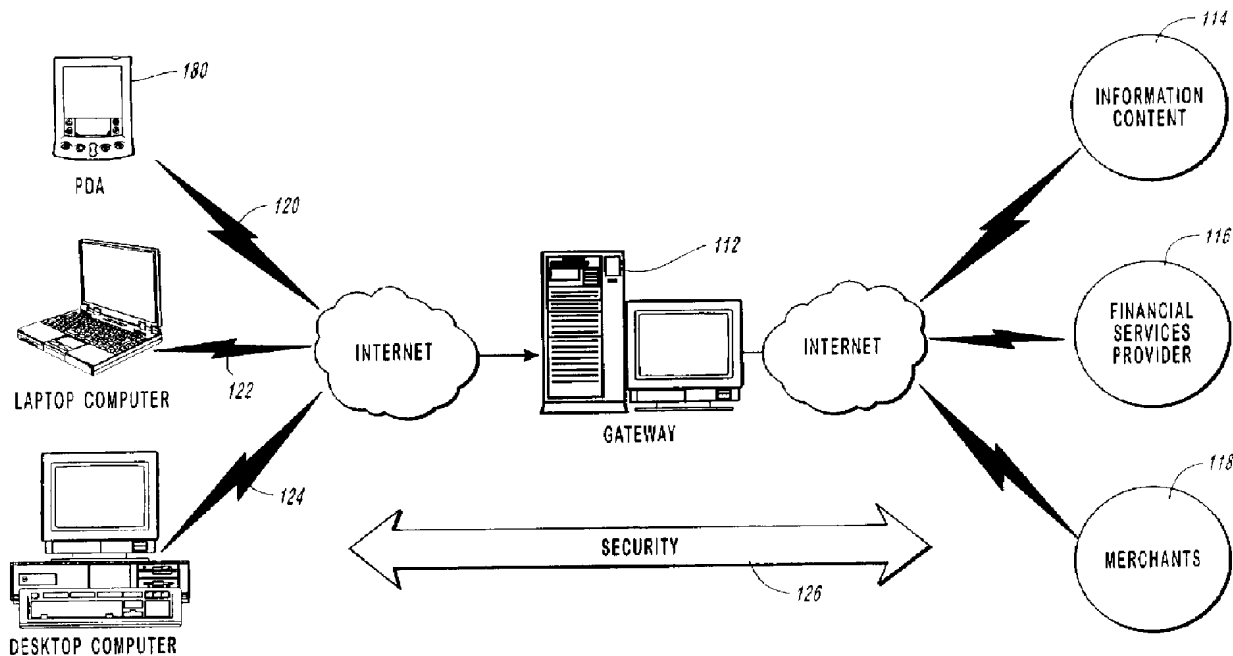
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(57) **Abrégé/Abstract:**

The present invention relates to an automated, mobile method for remotely managing personal or job-based resources through real-time allocation of the resources among a set of user-defined virtual spending accounts. One method enables the user to establish a single layer of virtual accounts for persona. Another method provides multiple layers of virtual accounts for business use such as having one layer that comprises job accounts representing individual jobs or projects and another layer that comprises allocation accounts representing categories of transactions such as "materials", "labor", "facilities", and "insurance". The user uses these virtual accounts in conjunction with actual accounts to track the user's transactions in real time. The user may also use the present invention to create and remotely transmit financial information such as purchase orders and invoices, keep a record of employees, enter employee time sheets, process payroll, and allocate and reconcile incoming and outgoing transactions between the various virtual accounts.

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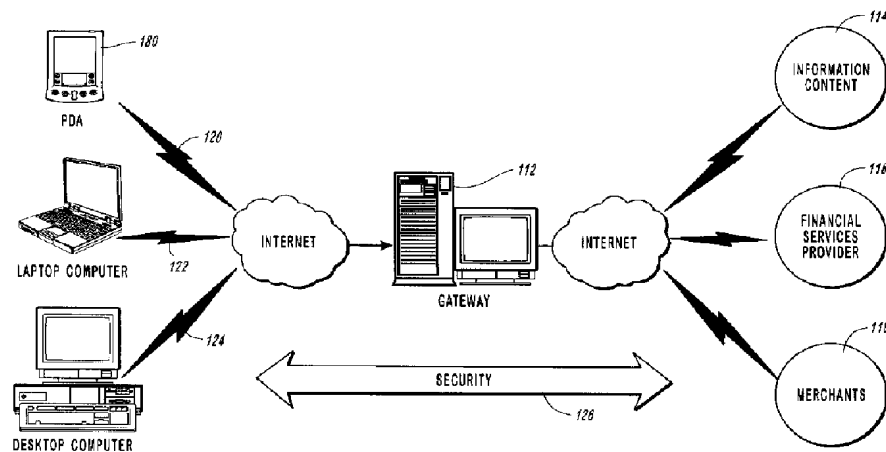
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(54) Title: METHODS AND SYSTEMS FOR JOB-BASED ACCOUNTING



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**METHODS AND SYSTEMS FOR JOB-BASED ACCOUNTING****BACKGROUND OF THE INVENTION**5       1.       **Field of the Invention**

The present invention relates generally to computer-based resource management systems, and, more particularly, to the job-based management of personal and business financial resources through the allocation of resources to various user-defined accounts in an automated environment.

10       2.       **Background**

Often individuals or businesses need and desire to achieve some measure of control over their financial affairs. Several software accounting programs have been developed to aid a business in managing its financial resources. Some of these programs include a budgeting system that allows a business to see where its money is invested or  
15       spent. Some of these programs further provide the user with the ability to perform several types of financial transactions on-line, including the ability to pay bills and to receive updated information with respect to cleared transactions from financial institutions such as banks and credit card companies.

One major problem with these existing accounting programs is the inability to  
20       provide up-to-date financial information needed to a business owner who is constantly on the go. For example, this problem represents a long-felt but unsolved need that is particularly taxing to sole proprietors who run a construction business. Often such a sole proprietor will be out in the field all day long engaging in various financial transactions, only to return home with a handful of bills and receipts representing transactions to either  
25       manually enter into a software program on a personal computer or to give to an accountant or CPA at the end of each month, quarter, or even year. Not only does this manual, after-the-fact, transaction entry take a great deal of time; without real-time access to account information, the business owner cannot make informed spending decisions while out in the field away from his or her personal computer. In other words, although  
30       existing accounting programs allow a user to establish a budget, these programs are inadequate because a user who is out in the field cannot make informed spending decisions without real-time access to his or her account information.

Besides not being able to provide real-time information, existing accounting programs also do not provide simple and intuitive budgeting systems that ensure that each  
35       spending decision is made in accordance with an established budget. For example, existing accounting programs typically allow the user to see how funds have been

allocated between different financial accounts by providing a representation or statement indicating how funds were allocated during a period of time such as a week, month, quarter, or year. That is, these accounting programs compare budgeted amounts with actual spending only after the spending has occurred. Moreover, when a business' transactions involve several different financial projects (e.g., in businesses such as job shops that contract out individual jobs or projects and/or regularly make job bids or estimates), this after-the-fact budget reporting proves complicated and useless for the typical small business owner who must quickly summarize such reported information in his or her head when making on-the-spot spending decisions.

#### BACKGROUND OF THE INVENTION

Financial accounting is well-known to those skilled in the art. Accountants have been used by individuals and businesses to manage financial resources over the years. The development of the personal computer for every day use has allowed the simplification of personal and business accounting by a user. Such financial accounting programs include Quicken® by INTUIT, of Menlo Park, California, and Money® by Microsoft, of Redmond, Washington. These programs are well-known and provide the every day user with simple yet robust accounting means for tracking one's financial resources.

For example, both Quicken® and Money® offer account management services for managing one's checking account, savings account, and money market funds. These services also provide a user the ability to perform on-line banking services with their respective financial institution. Thus, utilizing either of these programs, a user can provide bill paying options and account recordation of transactions performed by the bank without having to receive an end-of-month financial statement from the financial institution. This allows the user to keep an up-to-date record of his or her financial transactions. These transactions can include checks written, credit card bills paid, deposits to retirement accounts, automatic bill payment options, and the like.

Both these programs also provide a rudimentary budgeting system that allows a user to see where his or her money is invested or spent. A user can establish his or her own budget, which may be followed for financial discipline; however, the resources used to cover the budget typically are drawn from a single source or a few sources of revenue. An end of period, such as week, month, quarter, year, statement is provided for how that revenue had been allocated for different groups of financial interests to generate a budget allocation after funds have been drawn from but one or two sources. Thus, a user can establish a budget to follow, but the discipline of having a budget is not felt until a reconciliation of funds distributed during a given period is made with an accurate

accounting of payment and distribution is done. Only then does the user see whether he or she has been disciplined enough to follow the budget. This is because current budgeting system fail to allocate resources in a manner that forces the user to use the budget and achieve financial discipline.

5 Accordingly, what is needed is an automated resource and financial allocation system that instills greater financial discipline upon a user when desiring to follow a given budget prepared either by the user or by another in behalf of the user.

#### SUMMARY OF THE INVENTION

10 According to the present invention, a method and apparatus are disclosed that provide for automated financial resource allocation and accountability among various groups of budgeted accounts. The method provides for the user to establish the accounts to be budgeted, which accounts are overlaid an actual monetary account. The user then establishes a preset spending allocation amount for each account. Each time the user makes a spending allocation for that particular account, the account reflects the amount  
15 spent and notifies the user of the remaining amount allocated for that account during a given period. Each time a user receives cash it is deposited to these specific accounts in a manner that reflects the preset spending allocations set by the user. Thus, the user has a more accurate accounting of an established budget with respect to the established accounts, the resources allocated to each account, and the funds actually spent from each  
20 account.

The present invention describes a method and system, which are implemented on a computer system, that enables users to make proactive spending decisions by forming an environment where the user spends from traditional "expense" accounts as though they were individual spending or bank accounts. Thus, when a user receives funds, such as  
25 cash, the user allocates those funds by depositing them into user defined spending accounts or envelopes.

Some embodiments of the present invention provide a job-based method and system for managing business resources through allocation of the resources among a set of user-defined virtual spending accounts. The method, inter alia, enables the user to  
30 establish two layers of virtual accounts, virtual job accounts and virtual allocation accounts, that interact with the user's actual accounts. In a preferred embodiment, the job accounts represent various jobs or projects and are each designated by an envelope icon and a job number; the allocation accounts are designated by an envelope icon representing allocations or categories of transactions such as, e.g., materials, labor,  
35 permits, paint subcontractors, facilities, or insurance. After establishing the virtual accounts, the user establishes a limit representing a spending limit for each envelope or

virtual spending account. Thereafter, the user's transactions with other businesses or entities are reflected in the virtual spending accounts as well as in the user's actual accounts.

For example, some embodiments of the present invention can be used by a small business owner to make a job quote or bid that, upon approval/receipt of a contract, becomes saved as a job account with a corresponding envelope and job number. The business owner may set various spending limits for each job account as well as for various allocation categories (e.g., for "materials" and "labor," as mentioned above). Thereafter, the business owner may enter and keep track of transactions and compare actual spending with the budgeted limits set for each particular job account as well as the limits set for each allocation account within a particular job account. A preferred embodiment of the present invention also allows the user to create purchase orders and invoices, keep a record of employees, enter employee time sheets, process payroll, and allocate and reconcile incoming and outgoing transactions between the various accounts. Preferably, the user performs all these functions using a mobile computing unit, such as a personal digital assistant (PDA), laptop, or cell phone, that can remotely access account information.

Each time the user makes a spending transaction with respect to a particular job or project, the user may choose one or more appropriate job and/or allocation accounts from which to debit. Likewise, each time the user conducts an income-receiving transaction, the user may choose to which job and/or allocation account to allocate the amount. In other words, the user "spends" from and "deposits" to the virtual job and allocation accounts as though they were traditional bank accounts. In some embodiments, the user can also set certain transactions to debit or credit various accounts "automatically" at regular intervals of time or upon the happening of a certain event such as an on-line account reconciliation. In the preferred embodiments, the user may view a visual representation of the amount currently present in each virtual account juxtaposed against the spending limit for that particular account. Thus, the present invention allows the user to make real-time, informed spending decisions in accordance with the user's defined budget limits and in an intuitive and simple manner.

The present invention is operable in an automated environment potentially including a personal computer, laptop computer, PDA, mobile phone, smart phone, or other computer-type device that includes a central processing unit, memory means, input and output means, and optional data communication means. The data communication means may be used to connect directly to an entity such as a financial institution; it may also be used to connect to various entities through the Internet or any other type of



network. In a preferred embodiment, transactions can be reconciled and various documents such as job quotes, purchase orders, and time sheets can be transmitted remotely by fax or by other electronic means. Preferably, the present invention includes one or more wireless data communication means to accommodate the user's need for mobility.

The preferred embodiments of the present invention allow the user to retrieve real-time financial transaction information from a financial institution, thereby providing accurate, up-to-the-minute information with respect to payments authorized, checks cleared, and deposits made. An embodiment of the present invention also lets the user pay bills on-line using the various virtual spending accounts in conjunction with the actual accounts.

Hence, a method and system is provided for simplified and intuitive budget/spending management of a business that allows a user involved in several projects or jobs to be aware, in real-time, of the allocation of resources amongst various categories of transactions. As such, the present invention enables users to make better informed, proactive spending decisions and provide greater control over a business' financial condition. In particular, but by way of example and not of limitation, the present invention is well-suited for a sole proprietor of a construction business who is out in the field much of the work day and needs mobile, real-time access to his or her financial information.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other features of the present invention will become more fully apparent from the accompanying drawings when considered in conjunction with the following description and appended claims. Although the drawings depict only typical embodiments of the invention and are thus not to be deemed limiting of the invention's scope, the accompanying drawings help explain the invention in added detail.

Figures 1a through 1c illustrate an example of a computer environment in which the present invention typically operates;

Figure 1a shows a diagram of various entities that might be interconnected in one embodiment of a computer environment of the present invention;

Figure 1b is a diagram showing an example of some computer-type devices that might be included in the computer environment of the present invention;

Figure 1c is a block diagram of a typical computer-type device that might be included in the computer environment of the present invention;

Figure 2 is a block diagram illustrating a variety of possible types of inputs and outputs with respect to one embodiment of the present invention;

Figure 3 is a block diagram illustrating a plurality of virtual spending accounts established by a user in accordance with one embodiment of the present invention;

Figure 4 is a block diagram illustrating the manner in which virtual spending accounts operate in accordance with one embodiment of the present invention;

5        Figures 5a through 5p illustrate the method of operation of one embodiment of the present invention;

Figure 6 illustrates a computer enterprise in which the present invention operates;

Figure 7 illustrates a block diagram of a plurality of accounts established by a given user in accordance with the present invention;

10        Figure 8 illustrates a block diagram of a given account selected from Figure 2 detailing the financial information organized in accordance with the present invention; and

Figures 9a - 9f illustrate an information window view on a PDA in accordance with the present invention.

15        DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The figures listed above are expressly incorporated as part of this detailed description.

It is emphasized that the present invention, as illustrated in the figures and description herein, can be embodied or performed in a wide variety of ways. Thus, neither the drawings nor the following more detailed description of the various  
20        embodiments of the system and method of the present invention limit the scope of the invention. The drawings and detailed description are merely representative of the particular embodiments of the invention; the substantive scope of the present invention is limited only by the appended claims.

25        The various embodiments of the invention will be best understood by reference to the drawings, wherein like elements are designated by like alphanumeric characters throughout. Moreover, it should be noted that because the present invention is computer-implemented, particular embodiments may range from computer executable instructions as part of computer readable media to hardware used in any or all of the following  
30        depicted structures. Implementation may additionally be combinations of hardware and computer executable instructions.

Further, when the invention is described in the context of computer readable media having computer executable instructions stored thereon, it is emphasized that the instructions include program modules, routines, programs, objects, components, data  
35        structures, etc. that perform particular tasks or implement particular abstract data types upon or within various structures of the computing environment. Executable instructions

may comprise instructions and data which cause a general purpose computer, special purpose computer, or special purpose processing device to perform a certain function or group of functions.

In addition, computer readable media may comprise any available media which can be accessed by a general purpose or special purpose computer. By way of example and not limitation, such computer readable media can comprise RAM, ROM, EEPROM, CD-ROM or other optical disk storage, magnetic disk storage or other magnetic disk storage devices, or any other medium which can be used to store the desired executable instructions or data fields and which can be accessed by a general purpose or special purpose computer. Combinations of the above should also be included within the scope of computer readable media. For brevity, computer readable media having computer executable instructions may sometimes be referred to as "software" or "computer software."

With reference now to the accompanying drawings, Figures 1a and 1b show a computer-based environment 11 in which one embodiment of the present invention typically operates. In these figures, for purposes of illustration, the user is represented by a small business owner 10 who may be a sole proprietor of a construction business. Note that although the user 10 is here illustrated by a small business owner, the user 10 can be any individual, business, or entity that needs to manage the income and outgo of resources. It should also be noted that the present invention is particularly suitable for businesses that provide services or products on a job-by-job basis. Examples of such job-based businesses include contracting businesses, consulting businesses, and job shops.

Figure 1a shows various entities that may be connected to each other in a computer-based environment 11. In Figure 1a, user 10 preferably communicates via the Internet 12 with other entities, represented generally at 14. The entities 14 may comprise financial service providers 14a such as banks, credit unions, investment groups, and credit card companies; suppliers 14b such as merchants who supply business inventory or equipment; independent contractors or subcontractors 14c; and employees 14d.

Figure 1b shows an example of some computer-type devices used in a typical computer-based environment 11 of the present invention. In a preferred embodiment, the user 10 and various entities 14 are connected to each other via an Internet gateway 18 which typically comprises a computer system used for managing Internet access and web interaction. The gateway 18 allows the user 10 to communicate with the various entities 14.

Figure 1b further shows the computer-type devices that a user 10 and entities 14 may use to connect to the gateway 18 and interact with each other. In a preferred

embodiment of the present invention, the user 10 uses a PDA 16 to communicate with the gateway 18 and other entities 14. A user 10 or entity 14 may also use one or more computer-type devices such as a server 20, a mobile phone or smart phone (including an Internet-based cell phone) 22, a personal computer 24, a laptop computer 26, or other computer-type device. Figure 1c shows the basic structure of a typical computer-type device 27. This structure includes a processing unit 36, a memory or storage means 32, an input means 34, and an output means 38. As was mentioned above, memory or storage means 32 can include RAM, ROM, EEPROM, CD-ROM or other optical disk storage, magnetic disk storage or other magnetic disk storage devices, or any other storage medium. Other storage means 32 might include magnetic cassettes, flash memory cards, digital video disks, removable disks, Bernoulli cartridges, or the like. Input means 34 may include a keyboard, a pointing device (e.g., a mouse, touch pad, track ball, joystick, or stylus), a microphone, scanner, or the like. Examples of output means 38 include a monitor, a printer, a plotter, a fax, and speakers. The processing unit 36 can include a general purpose processor or special purpose processor.

The user 10 and entities 14 connect to the gateway 18 via data communication means, shown generally at 28 in Figure 1b, which may comprise a wireless means, a wire line, a cable modem, satellite dish, or other such communication means. Preferably, the communication means 28 employed by the user 10 is a wireless means that allows the user 10 to remotely access the gateway 18 or other entities 14. Although the user 10 and entities 14 are typically networked together via the Internet, the present invention also contemplates connection via a local-area network (LAN) system or other communication system where the user 10 and one or more entities 14 are connected directly to one another. Data communication means 28 typically further includes a network adaptor or modem for establishing connection to a LAN system or to the Internet.

Various protocols may be used for communication between the user 10, entities 14, and gateway 18. For example, a user 10 using a PDA preferably communicates via a wireless protocol. Also, in a preferred embodiment, the gateway 18 provides a platform that transforms data suitable for use in a wide variety of wireless networks including, e.g., Code Division Multiple Access (CDMA), Global System for Mobile Communication (GSM), Time Division Multiple Access (TDMA), Cellular Digital Packet Data (CDPD), Mobitex, and Internet Protocol. In a preferred embodiment, the gateway 18 also includes a server that communicates with one or more of the financial service providers 14a using protocols such as Open Financial Exchange (OXF) or Extensible Markup Language (XML). Gateway 18 is preferably extendable across a wide variety of protocols, operating systems, and networks. Moreover, the gateway 18 preferably incorporates a

data security means 30 so that data (for example, financial transactions) communicated through the gateway 18 is secured from access by unauthorized intruders. In a preferred embodiment of the present invention, the data security means 30 includes a user ID and password mechanism as well as standard cryptology protocols such as Secure Socket Layer (SSL) and Transport Layer Security (TLS). A preferred embodiment also  
5 contemplates the use of Public Key Infrastructure (PKI) technology that supports digital signatures.

Figure 2 shows an application program 42 that is preferably a software package or module that provides an interface whereby the user 10 manages and budgets his or her  
10 resources according to the method of the present invention. Application program 42 can integrally incorporate a database module or simply provide the interface that operates upon information held in an external database. Application 42 can also be designed to either include or interact with other modules or applications such as applications that are designed to organize or analyze actual financial information. Examples of such modules  
15 or applications might include: applications that provide for automatic bank and credit card account tracking and reconciliation; applications that provide for on-line bill payment (both automatic and user-instigated); applications that allow bills to be presented on-line; applications that let a user make payments via e-mail; applications that provide point-of-sale tools; applications providing a personal credit card processing tool;  
20 applications providing customized automatic reports; applications that allow a user to conduct on-line financial transactions with another entity such as a financial institution or a merchant; and applications that provide traditional financial accounting analysis and reports—e.g., Quicken® by INTUIT, of Menlo Park, California, and Money® by Microsoft, of Redmond, Washington. In one embodiment, application 42 incorporates  
25 all of the above features within itself rather than by interacting with external applications that provide those features .

Application 42 preferably operates in a graphical user interface (GUI) environment where the user 10 can manipulate data and information using pointing devices such as a mouse, roller ball, or PDA stylus. As such, application 42 typically  
30 operates within a Windows-type environment (e.g., Windows '95, MAC, Palm OS, HTML-, JAVA-, or EPOC-based platform-independent environments). The application 42 may be web-based or “native” to a particular computer device’s operating system.

Application program or module 42 may reside in various storage areas within a computer-based environment 11 along with other program modules such as an operating  
35 system, one or more application programs, other program modules, and program data. Moreover, any application programs, program modules, or data in the computer-based

environment 11—including application 42—may be stored in whole or in part in a local or remote computer storage device as well as may be linked to various processing devices that perform specific processing tasks.

In addition to the application program 42, Figure 2 also depicts typical inputs 40 and outputs 44 that may interact with application program 42. Examples of such inputs 40 include time sheets 40a, invoices 40b, purchase orders 40c, and bids (including job estimates or quotes) 40d. Examples of typical outputs 44 include payroll payments 44a, purchase orders 44b, accounts payable payments 44c, bids 44d, and reports 44e. The inputs 40 may be input into the application program 42 in a variety of ways. For example, the inputs 40 may be input by either a user 10 or a connected entity 14 who sends it electronically to the user 10 via fax, e-mail, Internet web sites (e.g., by filling out and uploading an electronic form provided by a web site) or other electronic means. Alternatively, the inputs 40 may be received by an entity 14 in hard copy form by the user 10 who then may input the received information using, for example, a scanner and scanning software or by manually typing in the information. The outputs 44 may also be generated electronically, in hard copy format, or both. Inputs 40 and outputs 44 may include voice inputs and outputs as well as any other type of electronically transmittable media. The manner of processing these inputs 40 and outputs 44 will be further explained herein.

Among the various types of possible reports 44e, application 42 preferably can generate various accounting and budget status reports—whether upon request by the user 10 or customized to do so automatically at regular intervals or upon the happening of some specified event. In some embodiments, these reports 44e can be based upon the user's request to see a cash flow statement; to see transactions related to an individual virtual spending account or transactions made with a particular payee; or to provide reconciliation reports between an actual account statement from a financial institution and the user's personal transaction record. Further, the system can generate a spending report showing the spending status versus the budget allocated for each of the virtual accounts. The reports 44e can also include reports for any particular actual account or for the entire system of accounts—both actual and virtual. The reports 44e can also be generated in various formats such as in the form of text, graphs, charts, voice or sound output, etc. Such reports can be set to generate automatically or upon the instigation of user 10.

With reference now to Figure 3, the block diagram therein represents a plurality of user-defined virtual envelopes or spending accounts 46 set up by a user 10 (or provided by default in the application program 42) in accordance with one embodiment

of the present invention. In the preferred embodiments, the virtual spending accounts 46 include two types: job accounts 46a-1 and allocation accounts 46b-1. Job accounts 46a-1 represent individual jobs or projects that the user 10 sets up. For example, a user 10 who is a contractor might set up "Job#1" to represent a particular subcontract. Likewise, the owner might set up "Job#2" and "Job#3" to represent other subcontracts.

As for the allocation accounts 46b-1, the user 10 might set up various categories of spending such as those shown in Figure 3: materials, labor, facilities, inventory, and insurance. For example, the "materials" allocation account might be set up to represent the user's transactions with respect to purchases of materials. The "labor" allocation account might be set up to represent transactions concerning employee and subcontractor costs such as taxes, salaries, workers compensation, and other forms of compensation. The "facilities" allocation account could represent transactions with respect to costs such as a lease of a building, utilities, mortgage payments, or repairs done on the user's facilities. The "inventory" allocation account could represent transactions concerning the purchase and sale of inventory. The "insurance" allocation account could represent transactions with respect to the payment for and receipt of insurance benefits. These allocation accounts 46b-1 are simply examples of possible allocation accounts that a user 10 may choose to set up.

Thus, the virtual accounts 46 comprise two layers of interrelated accounts that aid the user 10 in managing his or her business: job accounts 46a-1 and allocation accounts 46b-1. In some embodiments of the invention, the virtual spending accounts 46 may further include sub-accounts representing various subcategories of the respective parent accounts (e.g., the "materials" account may be subdivided into sub-accounts comprising Vendor A, Vendor B, and Vendor C).

Figure 4 shows the manner in which the virtual spending accounts 46, the ones shown here being job accounts 46a-1, operate in accordance with one embodiment of the present invention. Each virtual spending account 46 begins with a user-defined numerical limit or spending limit, here represented visually by line 51. In a preferred embodiment, the spending limits are established when the user creates job bids or quotes (as will be explained below). Each account also has a balance, which, in this example, is represented by line 52. As the user 10 receives income 48 or enters into income-producing transactions, a corresponding amount is allocated to the appropriate spending account or accounts 46, thereby increasing the appropriate balances 52. The allocation can be performed individually by the user 10 or be set up to be performed automatically at regular intervals or upon the occurrence of some specified event. As for outgo 50, when the user 10 makes spending transactions, the user 10 spends from the virtual

spending accounts 46, thereby decreasing the balances 52. Again, as with the income transactions 48, the allocation of the outgo 50 may also be set up to take place automatically.

Typically, when the user 10 performs a transaction, the user 10 will choose both the job account 46a-1 that the particular transaction applies to as well as the allocation account 46b-1 to which the transaction is to be attributed, thereby using two layers of virtual accounts 46 to manage transactions. In some embodiments, a transaction may be allocated between more than one job account 46a-1 and/or more than one allocation account 46b-1.

In the preferred embodiments, the virtual accounts 46 interact with actual accounts 60 (see Figure 5g) such as savings, checking, and credit accounts held by the user 10. In other words, the virtual spending accounts 46 (both layers—i.e., both the job accounts 46a-1 and the allocation accounts 46b-1) are preferably further “overlaid” over actual accounts 60 so that transactions from the virtual accounts 46 are simultaneously debited or credited from the actual accounts 60 held by the user 10. This synchronization may be programmed to take place automatically or upon user instigation. Moreover, in some embodiments of the invention, the user 10 may mark individual transactions by a symbol (such as “R,” as shown in Figure 5e, to represent “reconciled”). In some embodiments of the invention, the latter marking may take place automatically at an appropriate designated time.

The actual accounts 60 are established, in a preferred embodiment, during a set-up procedure where the user 10 is interviewed to select the institution in which the account is held and to provide an “account-friendly” name such as “my checking account” or “our joint checking account.” The user 10 also provides a starting balance, a start date, and any on-line user name and password information that facilitates on-line communication between the financial institution and the user. The virtual accounts 46 may be established in a similar manner. Once the accounts are set up, the user 10 can go back at any time and modify these accounts or add additional accounts. The present invention provides flexibility in that it allows the user to readily make such modifications according to the user’s desires.

In some embodiments, the set-up procedure also allows the user 10 to customize his or her account services. Once established, the user’s preferences are stored in a unique profile on the network rather than on a specific device. Thereafter, the user 10 may use any Internet-enabled device to access his or her accounts to retrieve information and conduct transactions without repeating the set-up procedure. Changes in preferences made by a user 10 on one device will automatically be reflected on all other devices used



by that user 10.

The system and method of the present invention preferably includes a visual representation of the virtual spending accounts 46 and their respective spending limits 51 as well as their balances 52. The visual representation may include, for example, text, graphics, sound, or a combination of any of the latter. Figure 4 shows one example of a graphical representation of a set of virtual spending accounts 46 with the corresponding balance 52 in the respective accounts juxtaposed against a graphical representation of the individual spending limits 51 so as to provide a simple and intuitive visual comparison for the user 10. In another embodiment, a graphical representation of the spending limits 51 could have differing heights for each spending account 46 (in addition to the differing heights represented by the different balances 52) reflecting differing spending limits for each account 46. Any sort of textual or graphic representation comes within the scope of this invention, including pie charts, bar charts, and the like. Figures 5a-5p show particular examples of graphical and textual representations of the virtual accounts 46 and their manner of operation according to one preferred embodiment of the present invention.

In some embodiments, the virtual accounts 46 can be modified, for example, to add, delete, or rename the various virtual accounts 46. The spending limits 51 as well as the virtual balances 52 for each of the accounts 46 may also be modifiable. In addition, the balances 52 can be set to reflect only cleared transactions or whatever other specific type of transaction that the user 10 desires. The balances 52 may also be set to reflect all transactions, both submitted and cleared.

The preferred embodiments of the present invention allow the user to retrieve real-time financial transaction information from a financial institution, thereby providing accurate, up-to-the-minute information with respect to payments authorized, checks cleared, and deposits made. An embodiment of the present invention also lets the user pay bills on-line using the various virtual spending accounts. If desired, the user 10 can go off-line to perform a transaction and then update or synchronize the transaction with the actual accounts when the user goes back on-line. The synchronization can be performed automatically or only when a user 10 so instigates it. Also, a user may enter transactions from a wireless device, such as a PDA, and then synchronize the information with the user's desktop computer at his or her home or office.

Various payments can be made on-line by the user 10. Any type of payments can be configured to be paid automatically by the user 10. In some embodiments, regular, fixed payments (e.g., monthly rent, insurance fees, etc.) made by the user 10 are configured to be paid on-line automatically. Such automatic payments may be configured

to automatically allocate to or from the appropriate virtual spending accounts 46.

Other features of the present invention may include optional notification of overspending for each account. Also, some embodiments of the present invention allow the user 10 to view transactions by a user-selected period such as a day, week, month, quarter, year, or any other selected period. In some embodiments, transactions may also be viewed simultaneously with one or more related job groups.

Figures 5a through 5p illustrate the method of operation with respect to one preferred embodiment of the present invention. These figures show the invention as embodied in part in a PDA, but any sort of computer-type device or wireless device may be used, including an Internet-enabled cell phone.

Figure 5a shows a main job screen displaying job accounts 46a-2 as numbered envelope icons with their respective remaining budget balances displayed on top of the icons. When one of the job accounts 46a-2 is selected (here, "Job 52-00" is selected), a budget summary 53 for that job is displayed. The user 10 may also choose to view a detail job summary screen by activating screen button 54. By activating screen button 56, the user 10 may view a job screen showing envelope icons representing allocation accounts 46b-2 pertaining to the above-mentioned selected job account.

Figure 5b shows a view of the detail job summary screen that is displayed when screen button 54 (shown in Figure 5a) is activated. This view shows job detail in dollar amounts, including price, budgeted cost and profit, the total amount expended for that job to date, as well as invoicing and collection history. If a user activates screen button 58, the detail job summary screen indicates the latter information in terms of percentages, as seen in Figure 5c.

Figure 5d shows a view of the screen that is displayed for a particular job when button 56 (shown in Figure 5a) is activated. Here, the virtual allocation accounts 46b-2 are represented by envelope icons labeled "labor," "materials," "permits," and "paint subcontractors." When the user 10 makes transactions with respect to a particular job, those transactions are allocated to the appropriate allocation accounts 46b-2. The allocation accounts 46b-2 represented by the envelope icons are here superimposed by a display of the remaining budget balances for each allocation category. When an envelope icon is selected, summary information is displayed for the selected allocation account. Also, from this screen, the user 10 may choose to view the detail job summary screen, view detail for each virtual allocation account, or enter a new transaction.

Figure 5e shows a detail screen for the "paint subcontractors" job account shown in Figure 5d. Here, specific transactions are shown together with the overall actual and cleared balances. "U" represents "unreconciled"; "R" represents "reconciled." From this

screen, the user 10 may select any transaction and view its related detail.

Figure 5f shows a detail view for a particular transaction 59.

Figure 5g shows a main accounts screen. This screen shows icons representing actual accounts 60 such as savings, checking, credit card, and money market accounts.

5 When an account is selected (here, the "In2M Checking" is selected), both actual and cleared balances are shown. From this screen, the user 10 may choose to enter a new transaction or view detail information for a selected actual account.

Figure 5h shows a detail screen of a particular actual account 60, the checking account shown in Figure 5g. This screen shows the account transactions together with the actual and cleared account balance. From this screen, the user 10 may choose to enter a new transaction or view detail information for a selected transaction.

Figure 5i shows a detail view of a particular transaction 62.

Figure 5j shows a main screen which allows a user 10 to choose to generate a job quote, a purchase order, or invoice—as mentioned in the above discussion of Figure 2. The user 10 may also enter the labor screen or process payroll.

Figure 5k shows a screen where the user 10 can create job quotes, estimates, or bids 40d (see Figure 2) by selecting the appropriate information, including payment terms and method of delivery. It should be noted that the user 10 can enter new information or alternatively select from a drop-down pick list that is opened upon activation of triangular icon 64. The items on the pick list are obtained from a list or database that is updated when the user 10 enters new information that is not already in the database.

In the preferred embodiments, job envelopes 46a-2 can originate from the quotations created at the screen shown in Figure 5k. Once created, these quotations are saved so that they can be transformed into job accounts 46a-2 upon receipt of a contract. For example, when a job quote is created, the user 10 establishes spending limits for the various virtual accounts 46—preferably for that individual job account as a whole as well as for each individual allocation account (i.e., the accounts categorized into "labor," "materials," "permits," etc.). When the quote is approved—i.e., when the quote or bid is accepted by the offeree, thereby creating a contract—the job quote is preferably automatically transformed into a job account having the previously established spending limits. In some embodiments of the invention, job envelopes 46a-2 may alternatively be created directly instead of through the creation of a job estimate or quote.

Figure 5l shows a screen where the user 10 may create purchase orders by selecting the appropriate information in a similar manner to that explained in conjunction with Figure 5k. The purchase orders are used to update the job accounts 46a-2. For example, the user 10 may submit purchase orders 44b to a supplier 14b or subcontractor

14c remotely by fax, e-mail, or other electronic means. In the embodiment shown, when creating the purchase order, the user 10 specifies the job number that the purchase order applies to. Thus, the virtual balance of the corresponding job account is automatically updated to reflect the cost of the purchase order.

5           Figure 5m shows a screen where the user 10 may create invoices 40b by selecting the appropriate information in a similar manner to that explained in conjunction with Figure 5k. The user 10 may also remotely send invoices just as he or she may remotely transmit purchase orders. In one embodiment, the user 10 may also receive invoices or purchase orders from a supplier 14b or subcontractor 14c (referring back to Figure 1a).  
10       Upon receipt of the invoices or purchase orders, any corresponding invoices and purchase orders may be automatically reconciled. Once reconciled, the appropriate accounts payable payments 44c may be sent to the appropriate party. The payments 44c can also be made automatically upon reconciliation and/or release of payment authorization.

          Figure 5n shows a screen where the user 10 may choose to maintain employee  
15       detail, enter daily time, and view payroll or time summary information. For example, time sheets 40a (shown in Figure 2) might be entered by the user 10 or directly submitted by the business user's employees 14d (referring back to Figure 1a) via fax, e-mail, or other electronic or manual means. The time sheets 40a might then be set to automatically debit the "labor" virtual spending account 46b within the appropriate job account and,  
20       after authorization, cut payroll checks. In one embodiment, the "Process Payroll" button (shown in Figure 5j) enables the user 10 to authorize the cutting of the payroll checks. Payroll payments are preferably sent electronically directly to the employees' personal accounts. This ability to process payroll in a mobile electronic environment provides significant time savings to the user 10.

25       Figure 5o shows a time sheet screen activated by screen button 66 of Figure 5n. Here, the user 10 can enter time by date, employee, job number, and activity. Further, daily totals are displayed. From this screen, the user 10 may select to view a time summary screen.

          Figure 5p shows a main upkeep screen where the user 10 may select upkeep  
30       activities including accepting and matching transactions, transferring amounts from one account to other accounts, allocating transactions, and reconciling accounts.

          Thus, the user 10 may remotely enter and keep track of various transactions with respect to any particular job account. In addition, documents such as job quotes, purchase orders, and time sheets can be transmitted back and forth remotely by fax or by  
35       other electronic means. As just shown, a preferred embodiment of the present invention allows the user 10 to create purchase orders and invoices, keep a record of employees,

enter employee time sheets, process payroll, and allocate and reconcile incoming and outgoing transactions between the various virtual accounts—all within a mobile computing environment. Thus, the present invention allows the user to make real-time, informed spending decisions in accordance with the user's defined budget limits and in an intuitive and simple manner.

In some embodiments of the present invention, transactions may be viewed by a user-selected period such as a day, week, month, quarter, year, or any other selected period. In some embodiments, transactions may also be viewed in various other job view and job groups. Also, a user may enter transactions from a wireless device and then hotsync the information with the user's desktop computer at his or her home or office.

The present invention is operable in an automated environment potentially including a personal computer, laptop computer, personal digital assistant (PDA), mobile phone, smart phone, Internet-enabled cell phone, or other computer-type device that includes a central processing unit, memory means, input and output means, and optional data communication means. The data communication means may be used to connect directly to an entity such as a financial institution; it may also be used to connect to various entities through the Internet or any other type of network. Thus, transactions can be reconciled and various documents such as job quotes, purchase orders, and time sheets can be transmitted remotely by fax or by other electronic means. Preferably, the present invention includes one or more wireless data communication means to accommodate a user's need for mobility.

The preferred embodiments of the present invention allow the user to retrieve real-time financial transaction information from a financial institution, thereby providing accurate, up-to-the-minute information with respect to payments authorized, checks cleared, and deposits made. An embodiment of the present invention also lets the user pay bills on-line using the various virtual spending accounts.

Referring back to Figure 4, income 48 and outgo 50 may come from and go to various sources, including the sources represented by inputs 40 and outputs 44. For example, time sheets 40a might be submitted by the business user's employees 14d (the latter shown in Figure 1a) via fax, e-mail, or other electronic or manual means. The time sheets 40a might then be set to automatically debit the "labor" virtual spending account 46b and, after authorization, cut payroll checks. In another possible type of transaction, the user 10 may submit purchase orders 44b to a supplier 14b or subcontractor 14c. The supplier 14b or subcontractor 14c could then send invoices 40b back to the user 10. Upon receipt of the invoices 40b, the invoices 40b and purchase orders 44b are preferably automatically reconciled. Once reconciled, the appropriate accounts payable payments

44c may be sent to the appropriate party. The payments 44c may also be made automatically upon reconciliation and release of authorization of the invoices 40b and purchase orders 44b.

In another type of transaction, a subcontractor 14c may submit a bid 40d to the user 10 who can then analyze the bid using the virtual budget accounts 46. For example, the user 10 can hypothetically deduct from the appropriate virtual budget accounts 46 the projected costs obtained from the bid 40d to see the resulting effect on the user's budget. Since the deduction is only hypothetical, the deduction would only be temporary; moreover, amounts in the actual accounts would not change as a result of these hypothetical transactions.

In yet another type of hypothetical transaction, the user 10 may similarly credit or debit hypothetical amounts for the purposes of making cost and income estimates in order to submit bids 44d. The user 10 may also create a hypothetical budget involving hypothetical virtual budget accounts. In a preferred embodiment, when bids 44d are accepted, the hypothetical virtual budget accounts become "normal" virtual budget accounts that synchronize with and debit and credit to and from actual accounts.

Various payments 40c can be made on-line by the user 10. Any type of payments 40c can be configured to be paid automatically by the user 10. Preferably, regular, fixed payments (e.g., monthly rent, insurance fees, etc.) made by the user 10 are configured to be paid on-line automatically. Also, such automatic payments are preferably configured to automatically allocate to or from the appropriate virtual spending accounts 46. Various reports 44e can also be generated in various formats such as in the form of text, graphs, charts, voice or sound output, etc. Such reports can be set to generate automatically or upon the instigation of user 10.

If desired, the user 10 can go off-line to perform a transaction and then update or synchronize the transaction with the actual accounts when the user goes back on-line. The synchronization can be performed automatically or only when a user 10 so instigates it.

Once the accounts are set up, the user 10 can go back at any time and modify any of these accounts or add any additional accounts that may be desired. The present invention provides flexibility in that it allows the user to readily make such modifications according to the user's desires.

Other features of the present invention may include optional notification of overspending for each account. Also, the user can enter any transaction off-line and then synchronize the transaction(s) when on-line so that those transactions are actually executed.

The present invention describes a method and system that is implemented on a computer system to enable users to make proactive spending decisions by forming an environment where the user spends from traditional "expense" accounts as though they were individual spending or bank accounts. Thus, when a user receives funds, such as cash, the user allocates those funds by depositing them into user-defined spending accounts or envelopes. When funds are spent, the user spends from defined spending envelope. This allocation enables the user to see in real time the impact of current spending and saving according to the budget established. Thus, once the user sees that the funds are nearly exhausted for a given account, the user can then reign in his or her spending consistent with the established budget based on available funds for the envelope.

The method and system are intended to operate in a personal computer environment, which environment not only includes desk top computer systems, but also lap tops, palm-sized PC's, personal digital assistants (PDAs), mobile phones, smart phones, or by access through an ISP. Data can then be synchronized to a secure central data storage site on the internet where that data can be accessed, previous transactions viewed, and where transactions can be made or allocated by any wire or wireless device with multiple simultaneous connections to the same centralized data. The method and system provide the user the ability to interact with on-line financial institutions, which include banks, investment groups, and credit organizations with either direct hands-on interaction or in an automated fashion defined by the user.

In a comprehensive system, a secure internet infrastructure, such as that illustrated in Figure 9c, is provided. The structure includes a provider gateway 112, which typically is a robust computer system typically used for managing web interaction and internet access and communication in a commercial setting. Such systems are well known to those skilled in the art. The gateway 112 provides two-way communication between a user and a further content destination such as an information contents source 114, financial service providers 116, and on-line merchants or off-line merchants via bill paying as illustrated as merchants 118. The user can connect to gateway 112 via either a wireless means 120, a direct connection wireline 122, or a cable modem or other cable-type connections 124. A security means 126 is provided so that the transactions provided by either the user on one side of the gateway or to the content providers on the other side of the gateway are secure at all times. At any time, the user can be offline and perform any transaction required or desired and then synchronize the transaction(s) when on-line so that it will be executed and performed. The system is intended to provide a user with the ability to manage his or her own spending accounts with various features. These

features include having automated expense categorization, tracking, and trimming. The features also include automatic bank and credit card account tracking and reconciliation in conjunction with the accounts managed, as well as automatic on-line bill pay from the various expense categorizations. Another feature includes on-line bill presentment where  
5 desired, as well as e-mail payment ability, point-of-sales tools, personal credit card processing tools, and automatic report generation.

The system is designed to operate in a graphical user interface mode where the user can manipulate data and information via such pointing devices as a mouse or roller ball, with keyboard entry also being provided, among others. As such, the system is  
10 typically designed to be operated within a Windows-type, MAC, JAVA, HTML, EPOC, etc., operating environment that can be readily implemented by those skilled in the art. Browsing devices use JAVA or HTML; others use resident Operating Systems.

During the initial account set-up, the user determines what type of tracking set-up is to be established. The user can select either an auto track set-up or a full track set-up.  
15 The auto track set-up performs activities in an automated fashion on behalf of the user as previously defined. The full track set-up allows the user to set up on-line bill payment as well as the ability to manipulate any default category available in the auto set-up mode. The full track set-up also allows the user to manipulate the default category settings that are typically found in the auto track set-up and allows the user to start tracking account  
20 expenses to some date prior to the date of set-up. In the auto track set-up mode, default category settings are established that are based upon balances received during an on-line or set-up entry interview with the user to establish starting balances. In the auto track mode, the account tracking activity begins as the day of set-up. The system proceeds to interview the user to provide information such as name, address, type of program or  
25 accounts to be utilized, home address, home phone number, fax numbers, and E-mails. Further, an on-line provider information is secured so that the user can use on-line communication tools to access on-line content providers as shown in Figure 9c.

Next, the user establishes the types of accounts to be tracked. These types of accounts are illustrated in the block diagram of Figure 9d. These accounts include a  
30 personal checking account 140, a personal savings account 142, various retirement accounts grouped together in retirement accounts 144, housing account 146, groceries account 148, credit accounts 150, recreation account 152, clothing account 154, utilities account 156, auto expense account 158, investment accounts 160, and gift accounts 162 and any other the user spending accounts desired. Such additional accounts can include  
35 personal brokerage investment and personal insurance accounts. These various accounts can be defined by the user with more or less accounts actually being established. It is not



intended that these accounts be limiting with respect to the implementation of the invention, but are merely illustrative of what types of accounts are possible. It is important to note that these accounts can be actual (such as banking and checking) or virtual such as the clothing and car expense accounts. The actual accounts reflect actual  
5 dollars in those accounts, while the virtual accounts reflect a hypothetical apportionment of an actual account. Both types of accounts may be utilized at the same time, with the virtual accounts being automatically reconciled with the actual accounts.

When establishing an account, such as, for example, a personal checking or savings account, the user is interviewed to select the institution in which the account is  
10 held, provide an account friendly name, such as my checking account or our joint checking account, including a starting balance, a start date, and any on-line user name and password information that facilitates the on-line communication between the financial institution and the user. Similar procedures are utilized for establishing other accounts personal credit card accounts, personal retirement accounts, personal brokerage  
15 investment accounts, and the personal insurance accounts as an option. In each case, an account number or provider, starting balances, start dates, user names and passwords are provided during this interview procedure. Once the interview procedure is completed, the user can return to modify any of these accounts or add any additional accounts that may be desired. The system and method are flexible for allowing the user to make such  
20 modifications so that changes can be readily made and integrated according to the user's desires.

Next, the user is able to establish various personal bank accounts known as expense envelopes, one of which is illustrated in Figure 9e and is labeled GROCERIES. The expense envelopes can be established to serve as a budgeting means for following  
25 a personal budget desired by the user. The account is established with a current available account balance as well as with expected inflows. Next, the user defines whether the envelope is to cover fixed required expenses at fixed intervals, such as on-line bill payment, or whether it is variable required expenses at fixed intervals, variable required expenses at variable intervals, such as credit/debit or other on-line bill pays, or variable  
30 discretionary expenses at variable intervals for expenses that cannot be routinely predicted. For each account as shown in Figure 9d, the user goes through and defines the envelopes within those accounts. For example, multiple checking accounts may be utilized with one envelope or many envelopes for each account. Likewise, for the savings accounts, the user would establish how many envelopes are desired for the number of  
35 accounts established.

The account envelopes, such as the one shown in Figure 9e, allow the user to

manage discretionary spending in a more detailed and concise way. For example, in Figure 9e, the GROCERIES account has been selected and a budgeting period, for example March, 2000, has been established. The period can be any defined period desired by the user, such as daily, weekly, monthly, quarterly, yearly, or any other selected period. The user, when setting up the account, defines whether this account is a variable expense or a fixed expense account. Since groceries typically vary in a nominal way, it can be selected as a fixed account, such as when the user has a buying relationship with a particular grocer who follows a purchase list and delivers the groceries to the user for a fixed rate. Otherwise, the user typically goes to the grocery store and makes the desired purchases and then enters the information in the account system at a later time. The user may or may not know the expenses on a monthly basis that are incurred in securing food and other grocery items. As such, the user may select this as a fixed account or a variable account. The user then provides an Amount Allocation as shown in Figure 9e. The amount allocated is then the ceiling to which the user is able to draw from this account. The account shows the ongoing cash balance in the account. The account also shows how much is actually spent in the Amount Spent field.

Groceries can also be defined as hybrid accounts such that they are required, but are often allowed discretionary purchases. As such, this would be a hybrid that the user would select. Selective sub-accounts are shown in the Sub-Accounts field and these can include such fields as food, eating out, non-food items, milk delivery, butcher delivery, and any other discretionary sub-account desired by the user to reflect the user's life style and purchasing spending habits. In this example, it is shown that each of the sub-accounts has incurred a certain expense for the month. This allows the user to see where the spending habits are so that appropriate lifestyle changes may be made if the spending is above budget. Further still, the account allows the user to provide on-line payment and is represented by the Payments Registered field as shown in Figure 9e. In this example, the user has a payment to Jones Grocery on March 25, and a second one to Brown's Catering on March 30. These payments will be made via the appropriate financial institution, but the funds will be allocated to the Groceries account rather than to the general checking account.

Each account of Figure 9d has a similar field that has the Amount Allocated field as well as the Amount Spent field. This allows a user to select from the particular envelope during the budgeting procedure so that the user is forced to conform to the budget established by the user in an attempt to instill financial discipline upon the user.

Each account, as well as each and all sub-accounts within a given account, can be modified according to the user's discretion. Thus, if the user finds that he or she has

greater financial resources than previously entered, then discretionary increases can be made in each allotted amount. On the other hand, if the user suffers a financial setback, then the user can manage the budget and amount allocated for a particular field so that better control of one's financial resources is achieved.

5           There are certain accounts that typically are fixed in relation, these accounts include housing costs, and auto loan payments. It is rare that these accounts would be manually managed so they are typically set up to be paid in an automated fashion with resources being allocated directly from the paycheck or other sources of income that the user has in order to fund these accounts. Other accounts would have greater needs for  
10           discretion and real time management, which would include the retirement accounts, the investment accounts, and other day to day credit accounts and such.

          In an alternative or complementary example shown in Figure 9a, the envelopes are shown in use on a personal digital assistant (PDA) device 180, which has a viewing window 182 to display information for the user. Viewing window 182 also is a touch  
15           screen panel that allows the user to directly access a particular envelope with a stylus. Additional information is provided in graphical form to convey budget information. For example, a budget spending bar 184 is shown to illustrate what percentage of the budget has been spent. Each envelope, such as an Auto envelope 186, a Groceries envelope 188, an Insurance envelope 190, and a Household envelope 192 show the available balance  
20           remaining on the icon representation of the same. Additional envelopes are shown upon scrolling up or down the window via scroll bar 194. When the user selects an icon, envelope summary information is then displayed, such as that shown in Figure 9e and Figure 9b. The user can also select to enter a new transaction via transaction icon 196 or select envelope detail via envelope icon 198.

25           Not only are money envelopes available, but the interface also allows the user to access other accounts via accounts folder 200. Further, upkeep options are available through upkeep folder 202.

          Figure 9b illustrates a detail screen 204 for a selected money envelope. In this example, the Groceries money envelope 188 has been selected. The information  
30           displayed includes specific transactions as well as an actual balance total and a cleared balance total. The specific transactions include date entered, payee name, amount of transaction, among others. The user can select the new icon 206 to enter a new transaction, the details icon 208 to view or edit more details of a given transaction, or the done icon 210, to close the envelope and return to the view of Figure 9a.

35           Figure 9c illustrates a detail screen 212 of the details for a transaction selected from Figure 9b. The information includes the payee name, the date of the transaction,

whether the transaction has been reconciled with the main account, what money envelope it belongs to, from which account the payment is actually made, and the method of payment, such as debit card, credit card, check, money order, or cash. These details can provide an electronic receipt by selecting icon 214.

5 If, in Figure 9a, the user selects the Account folder, screen 216 is displayed as shown in Figure 9d. Screen 216 displays information regarding each account the user has established in the form of an account icon that includes the current remaining balance within each account. Should the user select a given account, the actual and cleared balances are displayed below the account icon field 218. The user can enter new  
10 transactions or account information for a desired account via transaction icon 220 or account information icon 222. Figure 9e illustrates a screen 224 of account detail information for a selected account. For this example, the checking account has been selected and various transactions are displayed and can be selected for additional details. Again, the date, payee name, amount, and reconciliation information are provide for the  
15 user's benefit.

Figure 9f illustrates the upkeep folder screen 226, as selected in Figure 9a. Within the upkeep folder are the options of accepting, allocating, and matching incoming transactions, performing transfers of excess cash from one money envelope to one or more other money envelopes as desired. Further, the upkeep options allow the user to  
20 transfer cash from one account to another and to perform account reconciliation.

Other options included in this accounting system include report generation. These reports can be based upon the user's request to see transactions by envelopes, by payee, to see a cash flow statement, as well as to provide reconciliation reports between the account statement from the financial institution and the user's personal register. Further,  
25 the system can generate a budgetary report showing the spending status for each of the accounts. Additionally, a retirement calculator that allows the user to project future value of amounts given on certain interest rates can be produced. Lastly, the reports can include different expense accounts for any particular account or for the entire system as a whole.

30 The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. For example, additional implementations are presented in the Appendix section. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims, rather than by the foregoing description. All  
35 changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

25

The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments herein should be deemed only as illustrative. Indeed, the appended claims indicate the scope of the invention; the description, being used for illustrative purposes, does not limit the scope of the invention. All variations that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A method for job-based budget management of a business, the method comprising:

providing a plurality of virtual spending accounts with virtual balances;  
maintaining a user-defined numerical spending limit for each of the  
5 plurality of virtual spending accounts;

allocating at least one transaction to an appropriate virtual spending  
account selected from the plurality of virtual spending accounts;  
and

automatically adjusting the virtual balances of said spending accounts  
10 according to the allocated transaction.

2. The method of claim 1, wherein said transaction is automatically  
synchronized with at least one actual account.

3. The method of claim 1, wherein said virtual spending accounts are  
displayed in a graphical format.

15 4. The method of claim 1, wherein said method is performed using wireless  
communication.

5. The method of claim 1, wherein said transaction is transmitted both on-  
line and off-line.

6. The method of claim 1, further comprising providing for the submission  
20 of invoices.

7. The method of claim 1, further comprising providing for the submission  
of purchase orders.

8. The method of claim 1, further comprising providing for the submission  
of time sheets.

9. The method of claim 1, further comprising processing a payroll.

10. The method of claim 1, further comprising automatically creating a  
virtual job account upon approval of a job quote.

11. The method of claim 1, further comprising automatically paying said  
transaction on-line.

12. A job-based method for managing business resources, said method  
comprising:

providing a plurality of virtual accounts overlaid on at least one actual account,  
said virtual accounts comprising job accounts and allocation accounts  
each having individual virtual balances;

35 maintaining a fixed numerical amount for each of the plurality of virtual  
accounts, said numerical amount being fixed relative to said virtual

balances;  
allocating at least one transaction in real time to an appropriate virtual account  
among said virtual accounts; and  
automatically updating the appropriate actual accounts to reflect said transaction.

5           13.     The method of claim 12, wherein said method is performed using wireless communication.

          14.     The method of claim 12, further comprising providing for the submission of invoices.

          15.     The method of claim 12, further comprising providing for the submission  
10 of purchase orders.

          16.     The method of claim 12, further comprising providing for the submission of time sheets.

          17.     The method of claim 12, further comprising processing a payroll.

          18.     The method of claim 12, further comprising automatically creating a  
15 virtual job account upon approval of a job quote.

          19.     The method of claim 12, further comprising automatically paying said transaction on-line.

          20.     A method comprising steps for:

          providing a real time record of at least one actual financial account;

20           providing for the setup of at least one virtual job account overlaid on at least one actual account;

          providing for the setup of a plurality of virtual allocation accounts within said virtual job account;

          maintaining user-defined measures to represent user-defined budget limits for  
25           said virtual accounts;

          accepting data from a wireless device, said data representing at least one financial transaction pertaining to said job account;

          allocating funds from said financial transaction among the virtual accounts;

          providing a visual display for said job account for comparison between funds  
30           spent and said budget limits; and

          updating at least one of said actual accounts to reflect said financial transaction.

          21.     The method of claim 20, wherein said method is performed by an Internet-enabled cell phone.

          22.     The method of claim 20, wherein said allocating is performed by a  
35           personal digital assistant.

          23.     A computer-implemented method comprising:

displaying a plurality of virtual accounts, said virtual accounts comprising job accounts and allocation accounts each having individual virtual balances; displaying a budget limit for each of the plurality of virtual accounts; allocating a transaction in real time to a virtual account in response to the receipt  
5 of a user's selection from among the plurality of virtual accounts; automatically updating said virtual balances to reflect the allocated transaction; and updating an actual account to reflect said transaction.

24. The method of claim 23, wherein said virtual accounts are displayed in a  
10 graphical format.

25. The method of claim 23, wherein said method is performed by a wireless device.

26. The method of claim 23, further comprising providing for the submission of purchase orders.

15 27. The method of claim 23, further comprising providing for the submission of time sheets.

28. The method of claim 23, further comprising processing a payroll.

29. The method of claim 23, further comprising automatically creating a virtual job account upon approval of a job quote.

20 30. The method of claim 23, further comprising automatically paying said transaction on-line.

31. A computer-implemented method for budget management of a business, the method comprising steps for:

storing a real time record of at least one actual financial account;

25 receiving the setup of a plurality of virtual accounts, said virtual accounts comprising job accounts and allocation accounts each having individual virtual balances;

displaying a user-defined limit for each of said virtual accounts to represent an amount of budgeted funds;

30 accepting data representing a financial transaction pertaining to one of said virtual job accounts;

allocating, in response to a user's selection, funds from said transaction to at least one virtual account;

35 displaying, for each virtual account, a comparison between said limit and an amount of funds spent; and

updating, using a wireless protocol, an actual account to reflect said transaction.



32. The method of claim 31, wherein said method is performed by a personal digital assistant.

33. The method of claim 31, further comprising automatically creating a virtual job account upon approval of a job quote.

5 34. A method comprising:

specifying a plurality of virtual job accounts each having individual virtual balances;

selecting a spending limit for each of the plurality of virtual job accounts;

10 inputting at least one transaction related to at least one of said virtual job accounts;

specifying, on a mobile computing device, how said transaction is to be allocated among said virtual job accounts; and

viewing a comparison between the spending limits of the job accounts and the virtual balances of said job accounts.

15 35. The method of claim 34, wherein said transaction may be automatically synchronized with an actual account.

36. The method of claim 34, wherein said virtual job accounts are displayable in a graphical format.

20 37. The method of claim 34, wherein said method is performed by a wireless device.

38. The method of claim 34, further comprising automatically creating a job account when a job quote is approved.

39. The method of claim 34, further comprising automatically paying transactions on-line.

25 40. The method of claim 34, wherein said transaction is a labor transaction.

41. A computer data signal, embodied in a transmission medium such as a carrier wave, comprising instructions for:

providing a plurality of virtual spending accounts with virtual balances;

30 maintaining a user-defined numerical spending limit for each of the plurality of virtual spending accounts;

allocating at least one transaction to an appropriate virtual spending account selected from the plurality of virtual spending accounts; and

automatically adjusting the virtual balances of said spending accounts according to the allocated transaction.

35 42. The method of claim 41, wherein said transaction is automatically synchronized with at least one actual account.

43. The method of claim 41, wherein said virtual spending accounts are displayed in a graphical format.

44. The method of claim 41, wherein said method is performed using wireless communication.

5 45. The method of claim 41, wherein said transaction is transmitted both on-line and off-line.

46. The method of claim 41, further comprising providing for the submission of invoices.

10 47. The method of claim 41, further comprising providing for the submission of purchase orders.

48. The method of claim 41, further comprising providing for the submission of time sheets.

49. The method of claim 41, further comprising processing a payroll.

15 50. The method of claim 41, further comprising automatically creating a virtual job account upon approval of a job quote.

51. The method of claim 41, further comprising automatically paying said transaction on-line.

52. A system comprising:

a plurality of networked computer-type devices;

20 a user interface for entering transactions into one of said computer-type devices;

a data structure comprising a dual layer of virtual accounts defined by a user via said interface;

a storage device, housed in one of said computer-type devices, wherein said data structure resides;

25 an application program, residing in one of said computer-type devices, that allocates user-inputted transactions to appropriate virtual accounts among said virtual accounts; and

a viewing device, connected to one of said computer-type devices, that allows a user to view a representation of a comparison of a numerical balance of one of said virtual accounts with a user-designated numerical limit for the corresponding virtual account.

30 53. The system of claim 52, wherein said dual layer of virtual accounts comprises job accounts and allocation accounts.

35 54. The system of claim 52, wherein said transactions may be automatically synchronized with at least one actual account.

55. The system of claim 52, wherein at least one of said computer-type

devices is a wireless device.

56. The system of claim 52, further comprising means for automatically creating a virtual job account when a job quote is approved.

57. A computer-readable medium comprising instructions for:

5 representing a plurality of virtual accounts overlaid on at least one actual account, said virtual accounts comprising job accounts and allocation accounts each having individual virtual balances;

maintaining a fixed numerical amount for each of the plurality of virtual accounts, said numerical amount being fixed relative to said virtual  
10 balances;

allocating at least one transaction in real time to an appropriate virtual account among said virtual accounts; and

updating the appropriate actual accounts to reflect said transaction.

58. The computer-readable medium of claim 57, wherein said instructions are  
15 transmitted in part by wireless communication.

59. The computer-readable medium of claim 57, further comprising instructions for the submission of invoices.

60. The computer-readable medium of claim 57, further comprising instructions for the submission of purchase orders.

20 61. The computer-readable medium of claim 57, further comprising instructions for the submission of time sheets.

62. The computer-readable medium of claim 57, further comprising instructions for the processing of a payroll.

25 63. The computer-readable medium of claim 57, further comprising instructions for automatically creating a virtual job account upon approval of a job quote.

64. The computer-readable medium of claim 57, further comprising instructions for automatically paying said transaction on-line.

65. The computer-readable medium of claim 57, wherein said computer-readable medium has a wireless connection to the Internet.

30 66. A method for managing financial resources in an automated fashion comprising:

establishing a plurality of virtual financial accounts overlaid upon at least one actual financial account;

allocating a given amount of funding for each of the plurality of accounts;

35 allocating transactions to an account selected from the plurality of accounts; and

debiting or crediting the allocated fund amount according to the transaction

allocated to the particular account and from the actual financial account.

67. The method according to claim 66, further comprising the step of determining a balance with each of the plurality of virtual financial accounts.

68. The method according to claim 67, further comprising the step of displaying the balance of an account after transaction allocation and debit or credit of the transaction.

69. The method according to claim 66, further comprising the step of distinguishing between transactions that have cleared real time through the actual financial account and those that have not within each of the plurality of virtual financial accounts.

70. The method according to claim 66, further comprising the step of displaying transaction information of a selected allocated transaction within one of the virtual financial accounts.

71. A method for managing financial resources in an automated fashion comprising:

establishing a plurality of virtual financial accounts overlaid on actual accounts;  
allocating a given amount of funding for each of the plurality of virtual accounts;  
and

allocating transactions in real time to the appropriate virtual accounts so that individuals in remote locations may view the accounts and coordinate purchases.

72. The method according to claim 71, further comprising the step of determining a balance with each of the plurality of virtual financial accounts.

73. The method according to claim 72, further comprising the step of displaying the balance of an account after transaction allocation and debit or credit of the transaction.

74. The method according to claim 71, further comprising the step of distinguishing between transactions that have cleared real time through the actual financial account and those that have not within each of the plurality of virtual financial accounts.

75. The method according to claim 71, further comprising the step of displaying transaction information of a selected allocated transaction within one of the virtual financial accounts.

76. An apparatus used to manage financial resources in an automated fashion comprising:

means for establishing a plurality of virtual financial accounts overlaid upon at

least one actual financial account;  
means for allocating a given amount of funding for each of the plurality of  
accounts;  
means for allocating transactions to an account selected from the plurality of  
accounts; and  
means for debiting or crediting the allocated fund amount according to the  
transaction allocated to the particular account and from the actual  
financial account.

77. The apparatus according to claim 76, further comprising means for  
determining a balance within each of the plurality of virtual financial accounts.

78. The apparatus according to claim 77, further comprising means for  
displaying the balance of an account after transaction allocation.

79. The apparatus according to claim 76, further comprising means for  
distinguishing between transactions that have cleared real time through the actual  
financial account and those that have not within each of the plurality of virtual financial  
accounts.

80. The apparatus according to claim 76, further comprising means for  
displaying transaction information of a selected allocated transaction within one of the  
virtual financial accounts.

81. An apparatus used to manage financial resources in an automated fashion  
comprising:

means for establishing a plurality of virtual financial accounts overlaid on  
actual accounts;  
means for allocating a given amount of funding for each of the plurality of  
virtual accounts; and  
means for allocating transactions in real time to the appropriate virtual accounts  
so that individuals in remote locations may view the accounts and  
coordinate purchases.

82. The apparatus according to claim 81, further comprising means for  
determining a balance with each of the plurality of virtual financial accounts.

83. The apparatus according to claim 82, further comprising means for  
displaying the balance of an account after transaction allocation and debit or credit of the  
transaction.

84. The apparatus according to claim 81, further comprising means for  
distinguishing between transactions that have cleared real time through the actual  
financial account and those that have not within each of the plurality of virtual financial

accounts.

85. The apparatus according to claim 81, further comprising means for displaying transaction information of a selected allocated transaction within one of the virtual financial accounts.

5 86. The apparatus according to claim 81, further comprising means, coupled to the transaction allocation means, for accessing remote account information.

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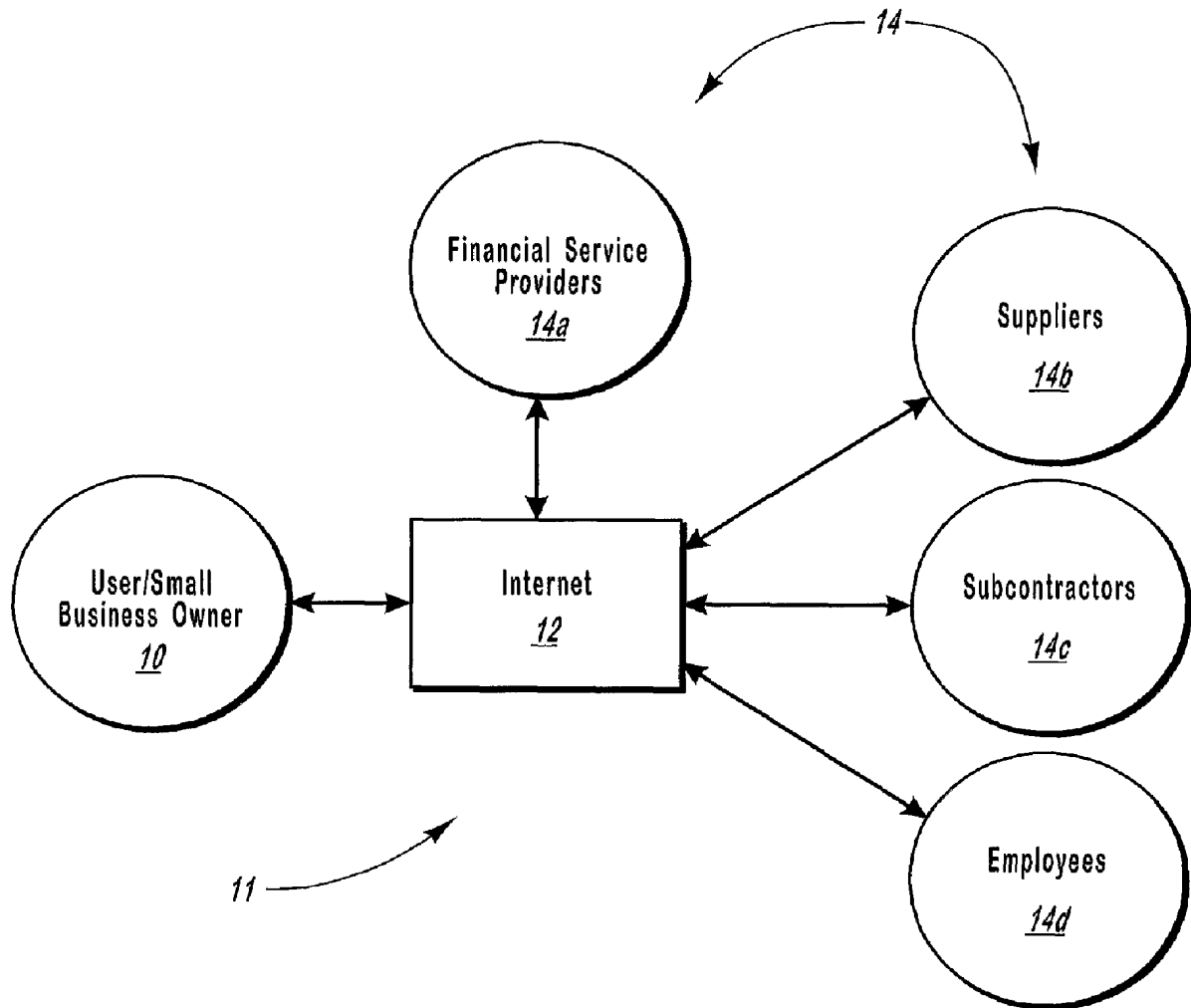


Fig. 1a

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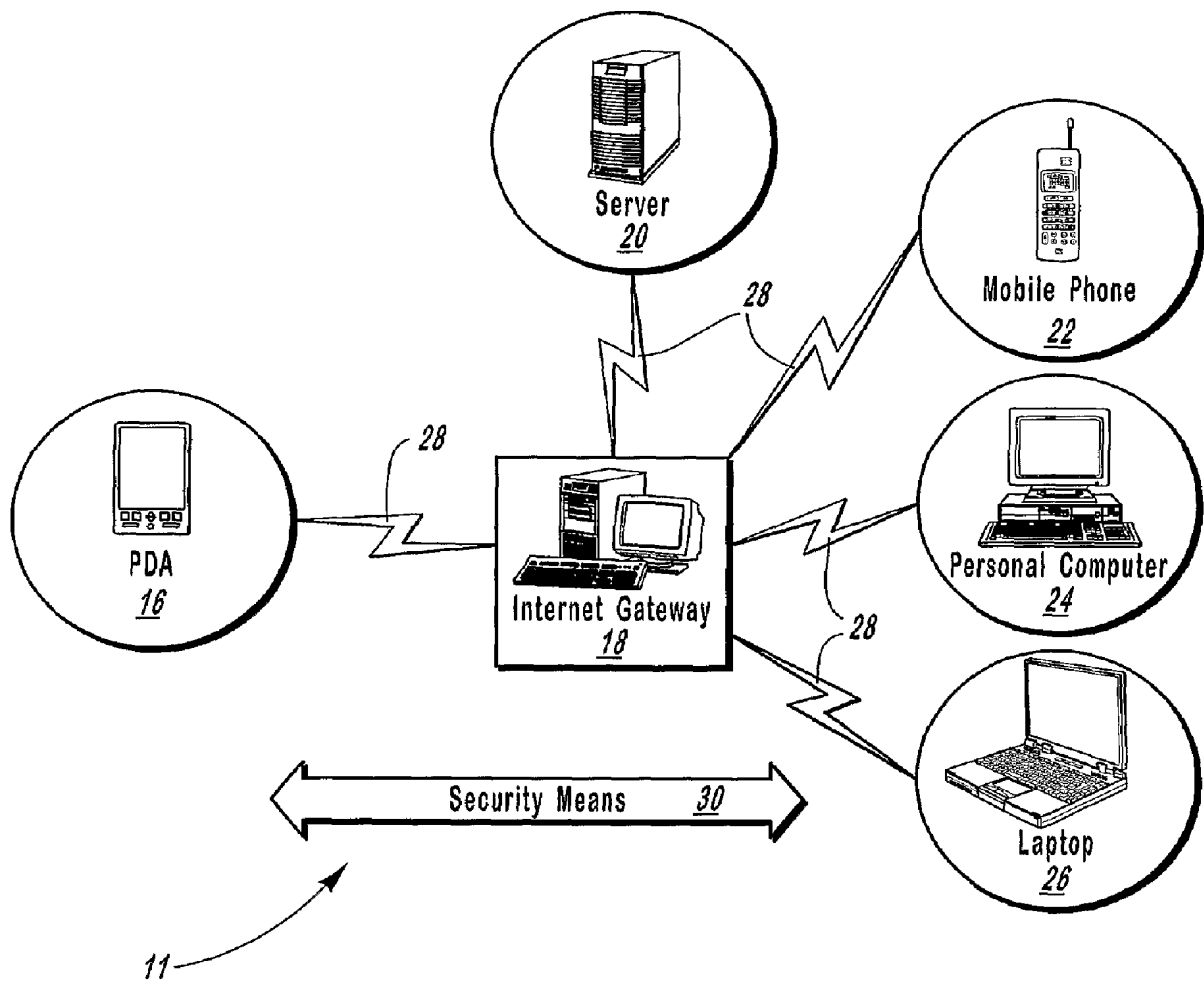


Fig. 1b



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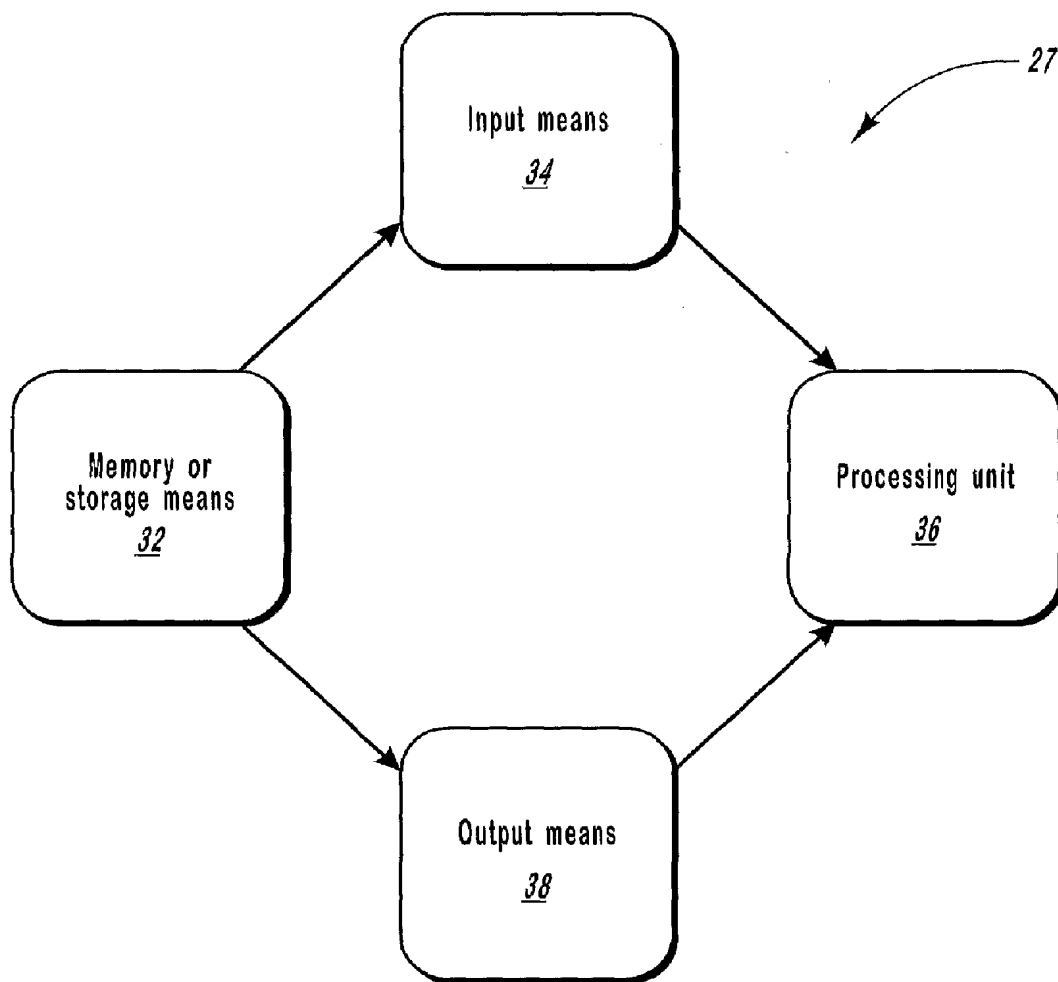


Fig. 1c

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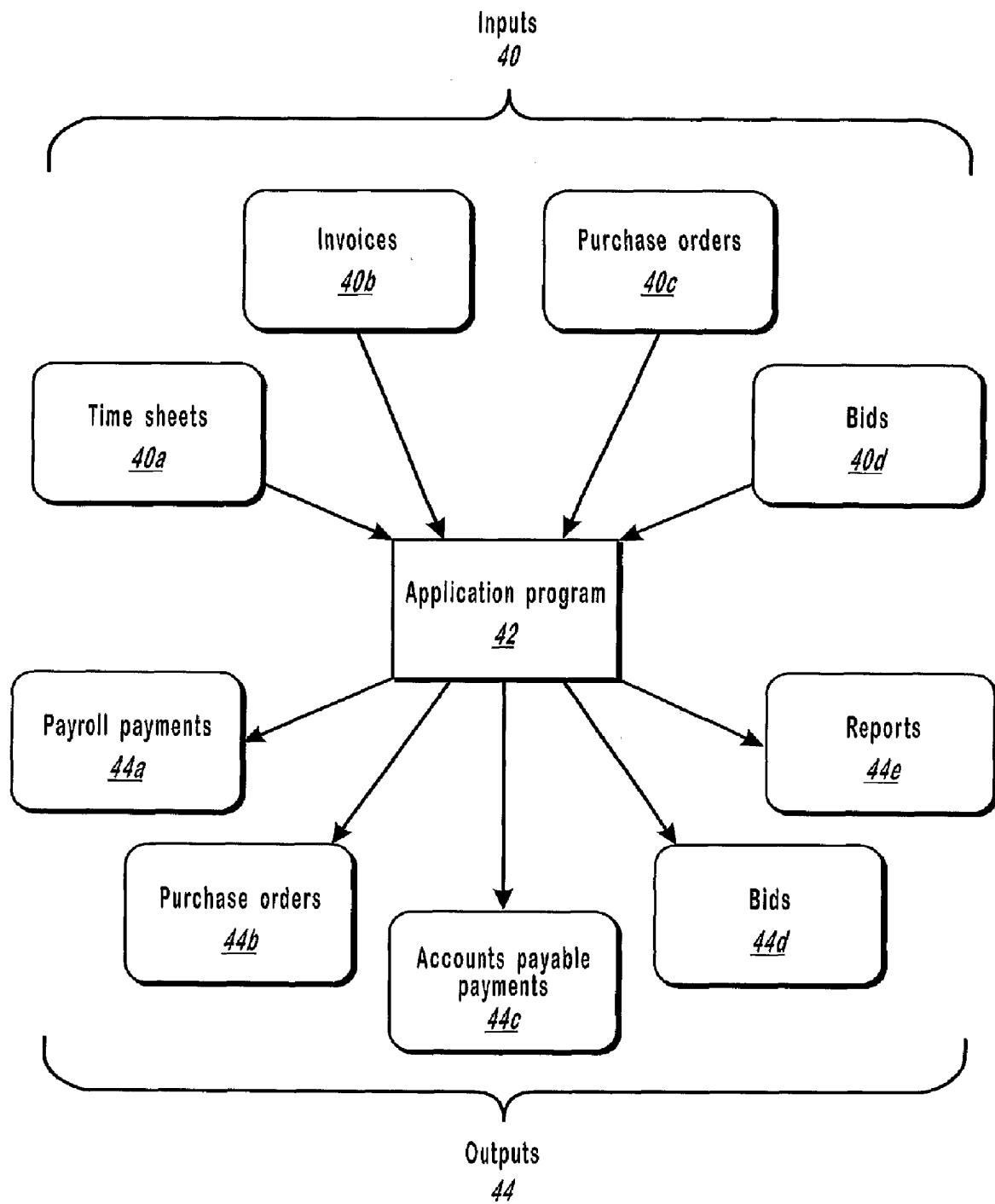


Fig. 2

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46a-1

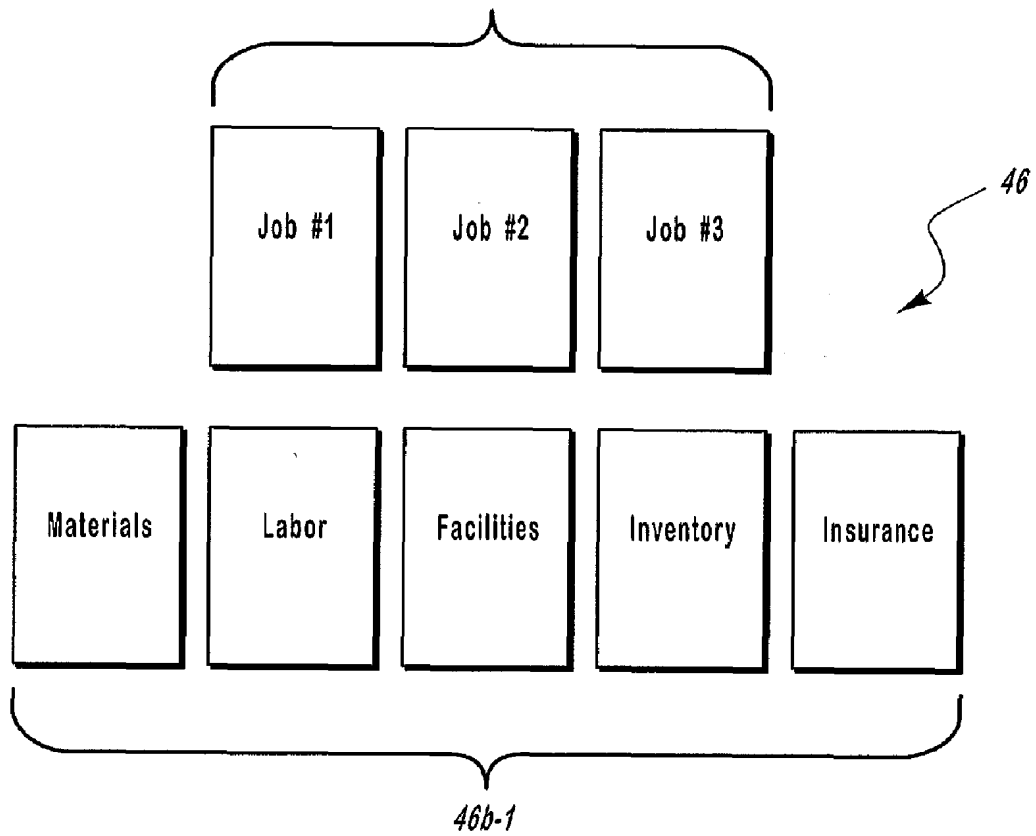


Fig. 3

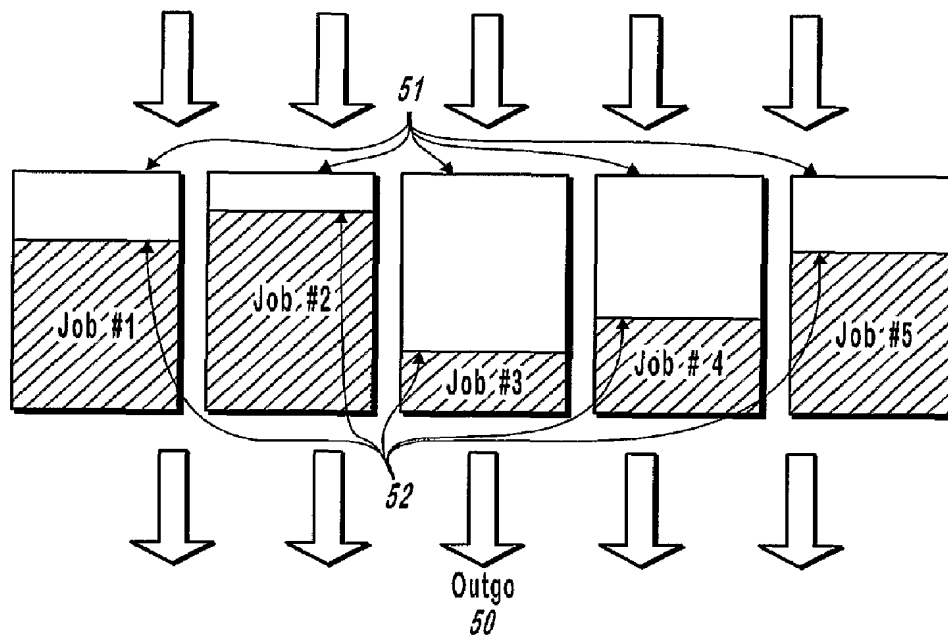
Income  
48

Fig. 4

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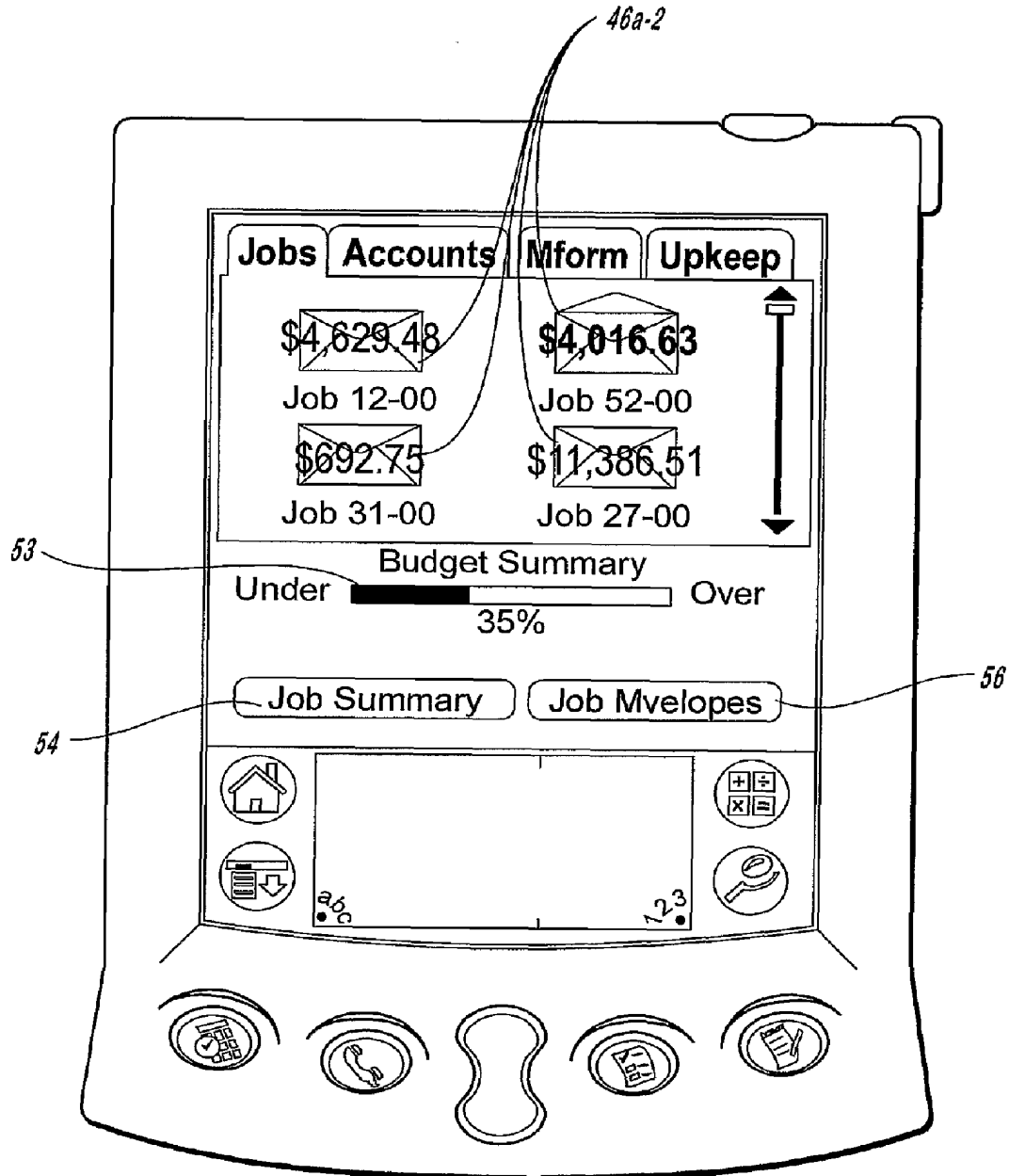


Fig. 5a

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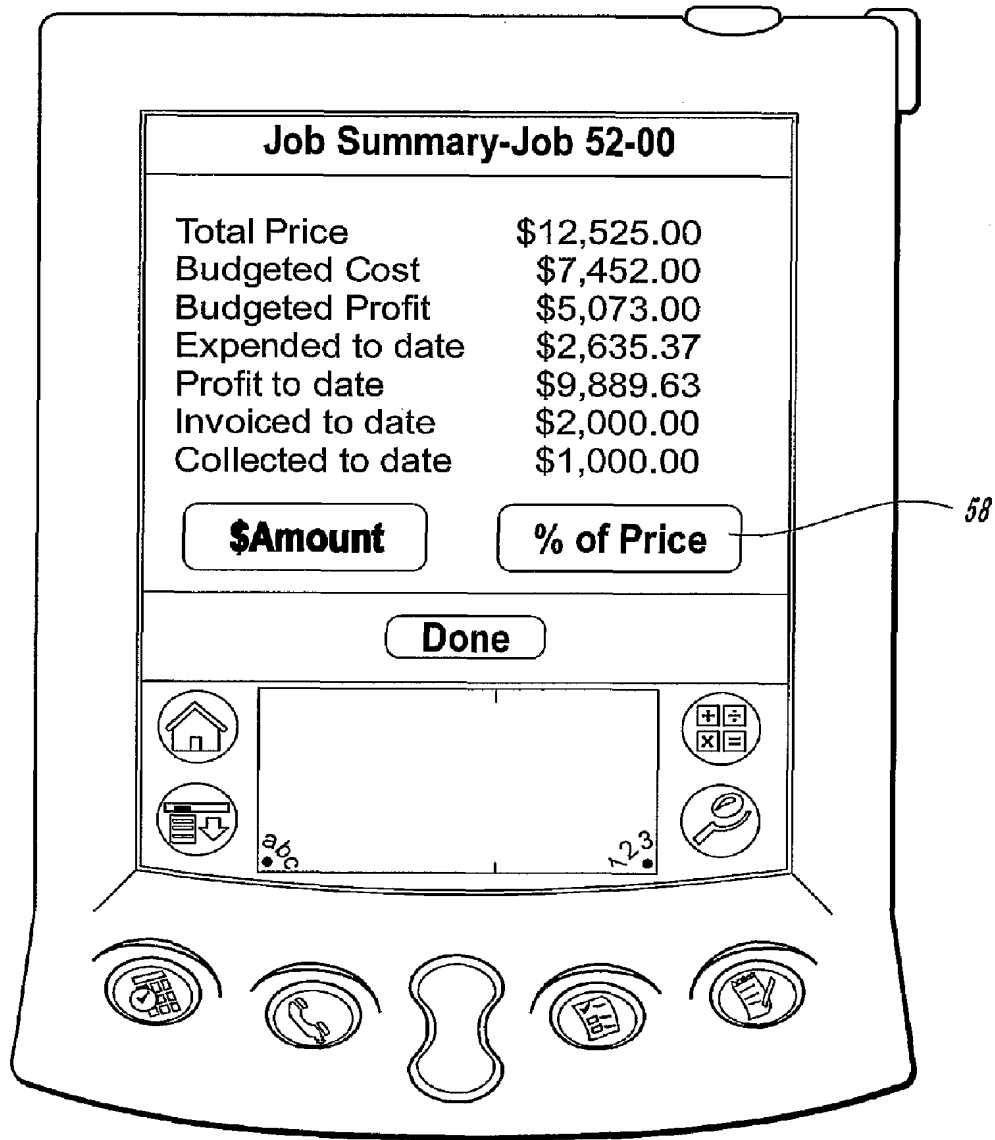


Fig. 5b

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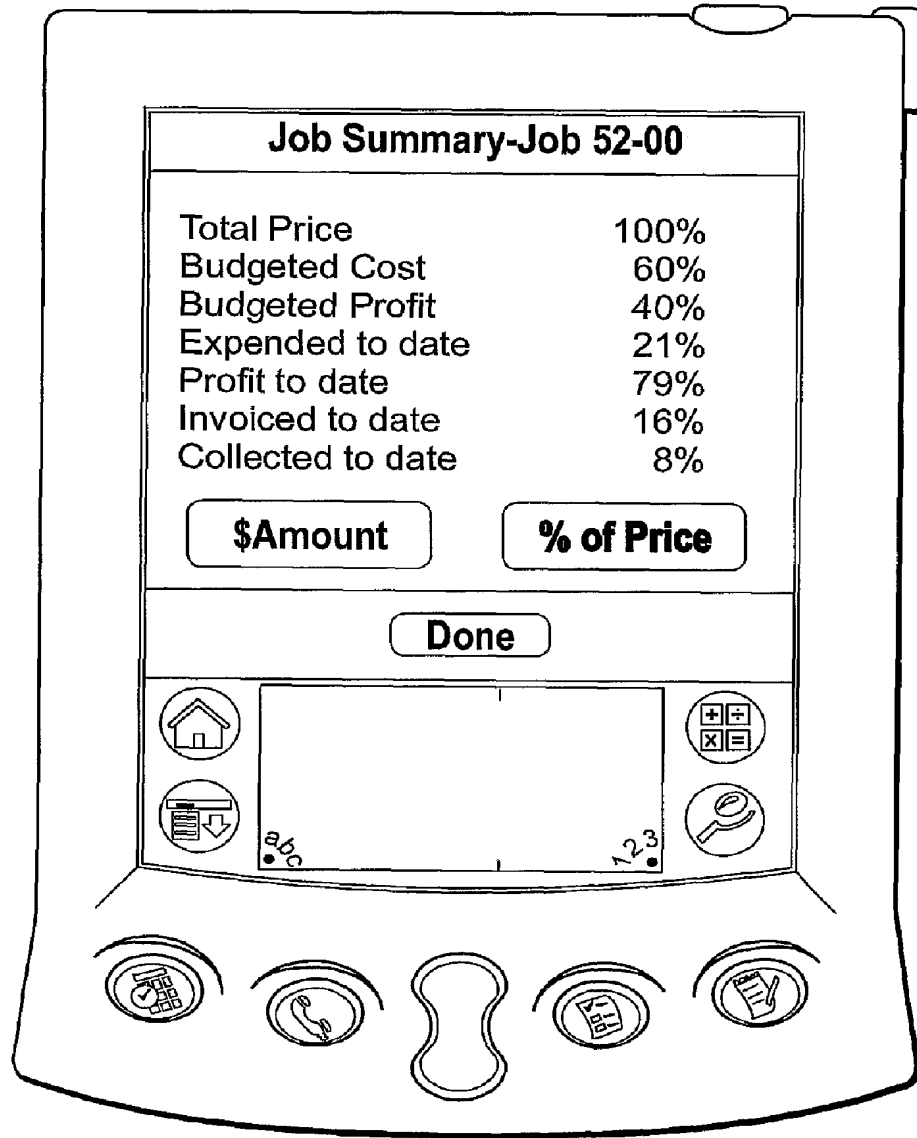


Fig. 5c

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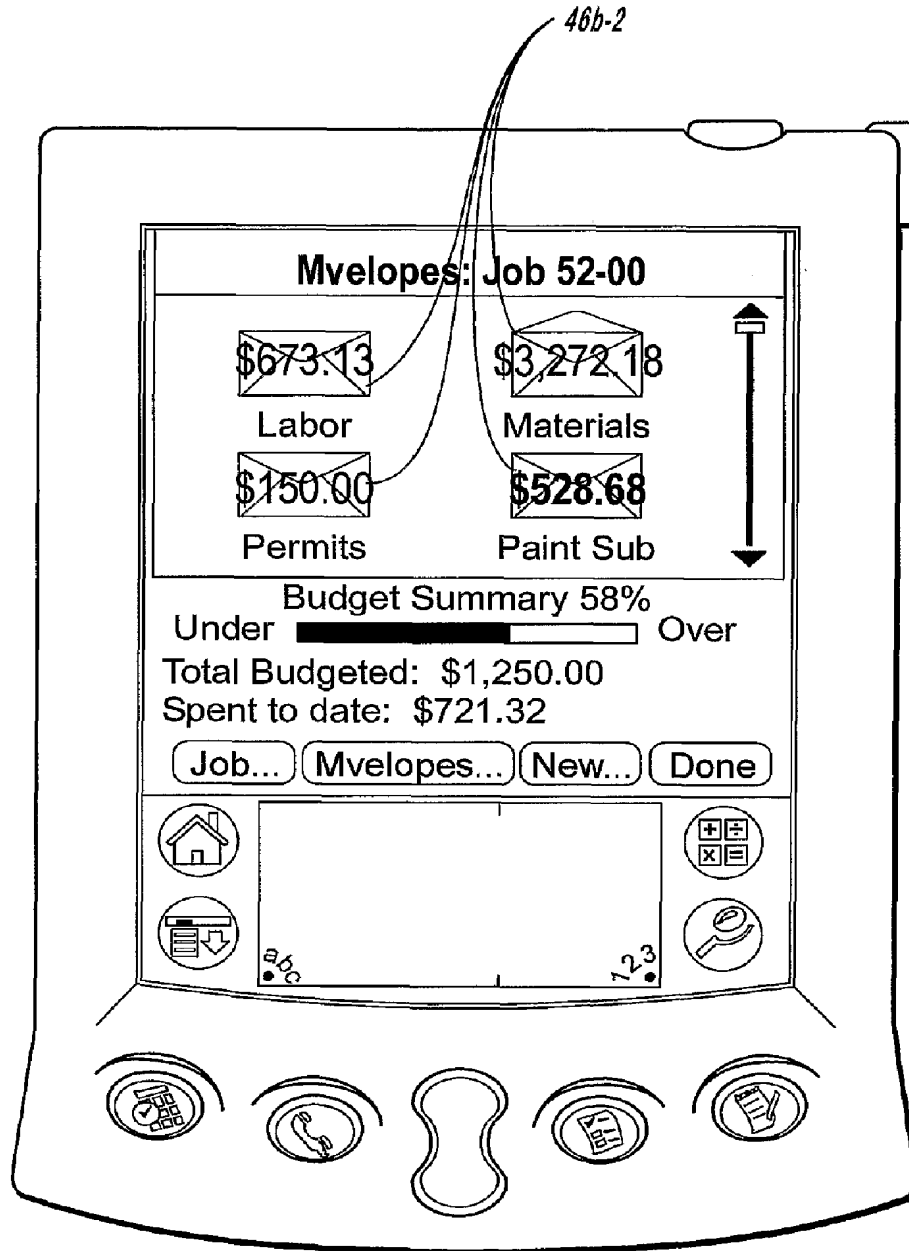


Fig. 5d

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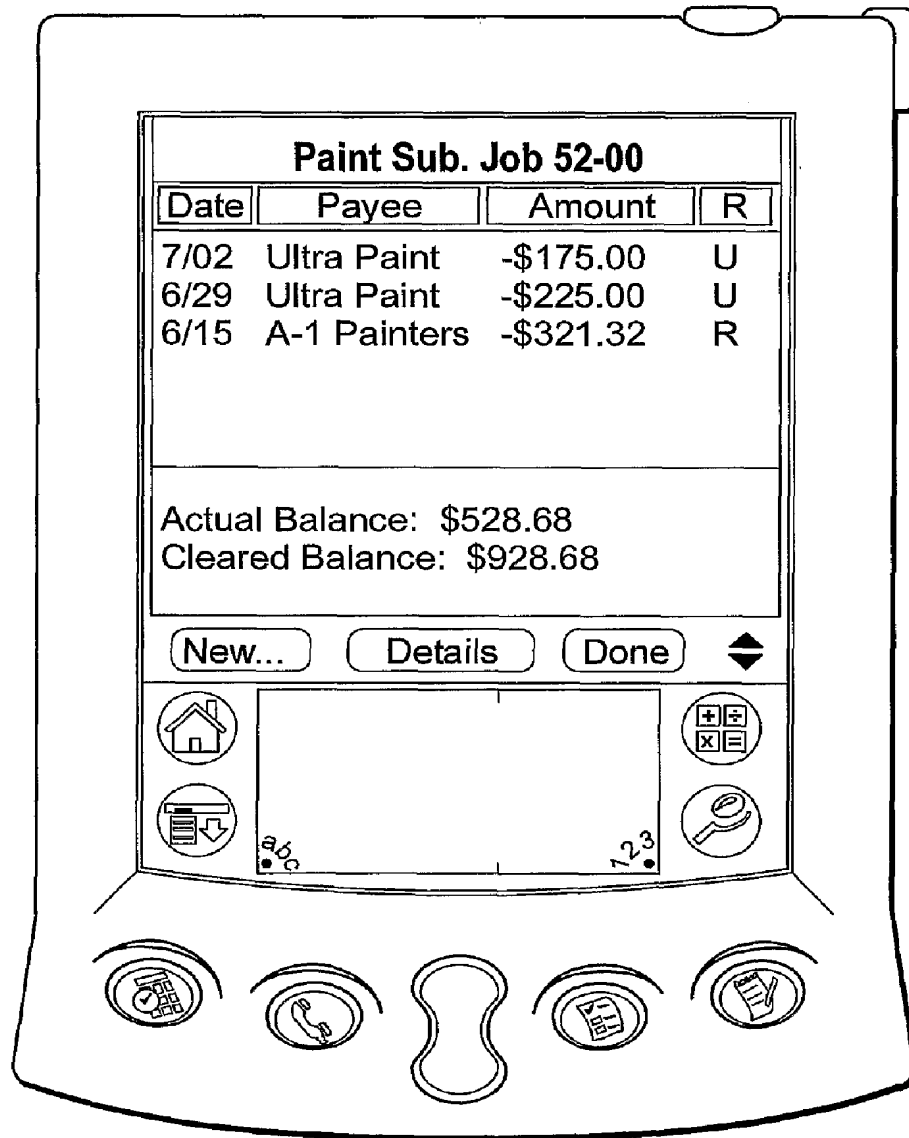


Fig. 5e



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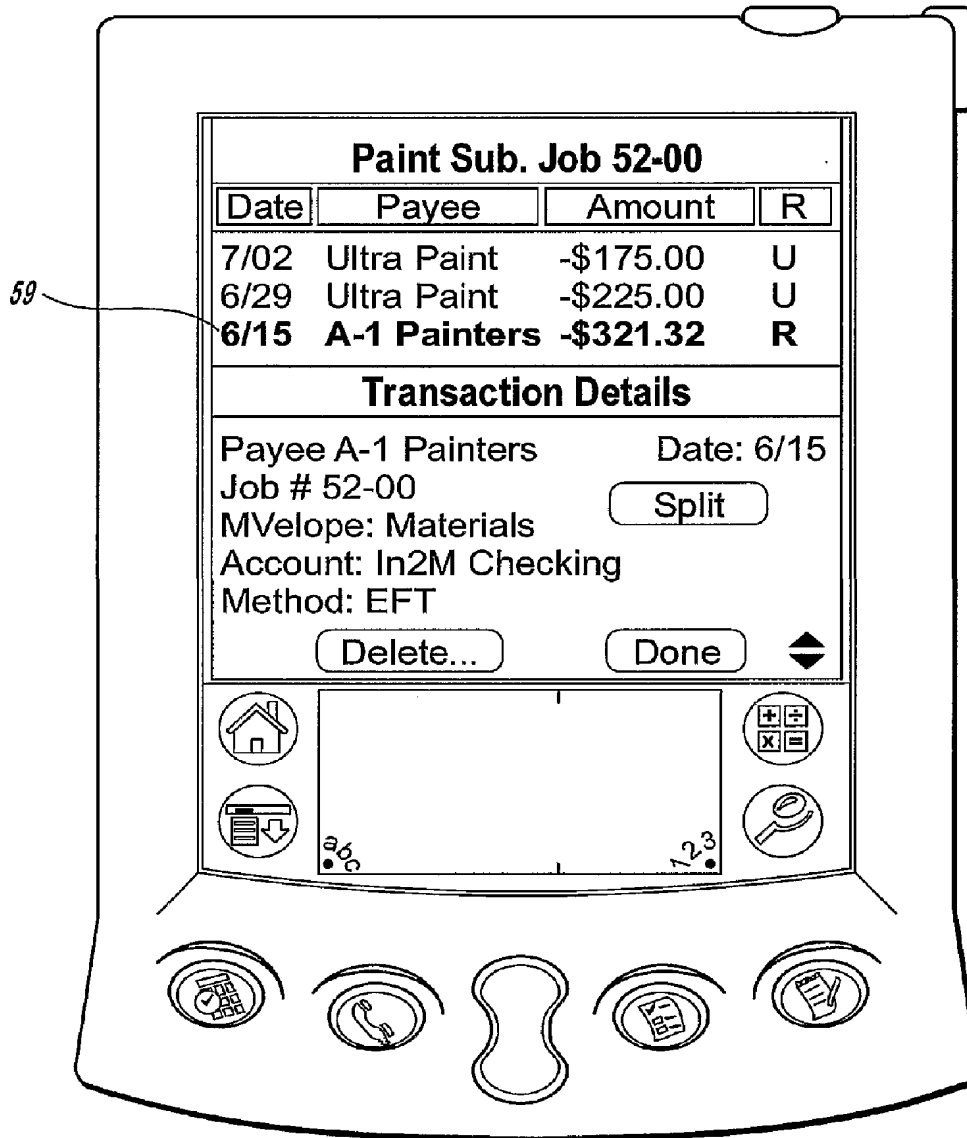


Fig. 5f

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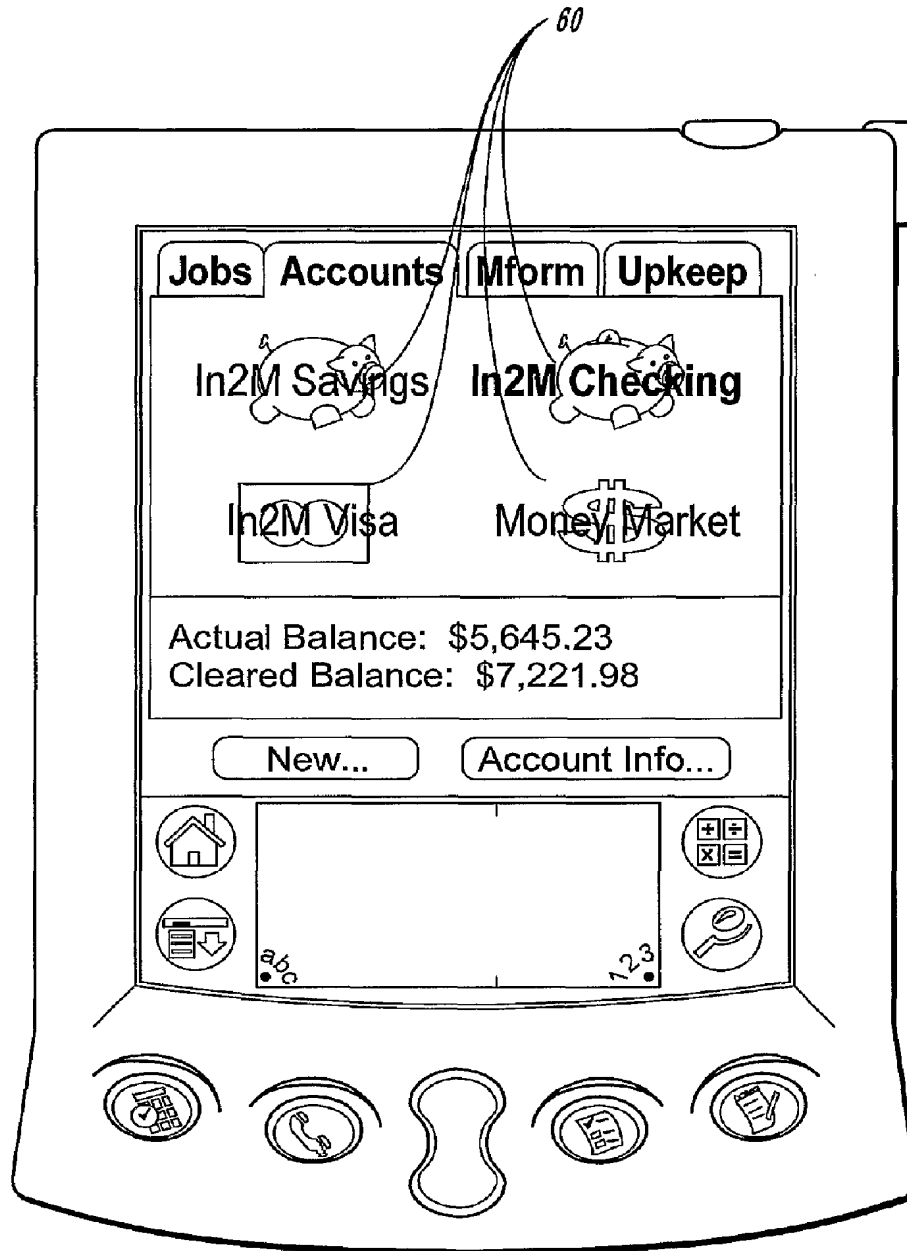


Fig. 5g

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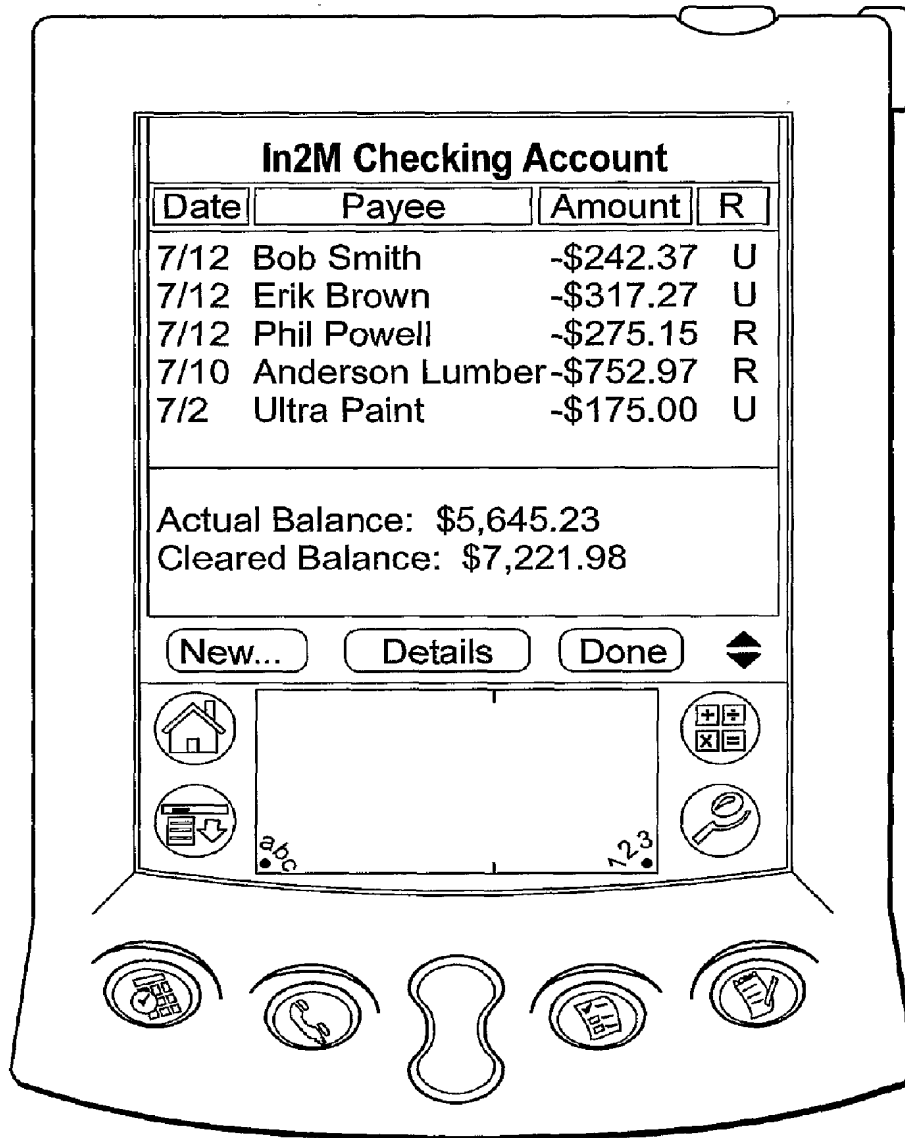


Fig. 5h

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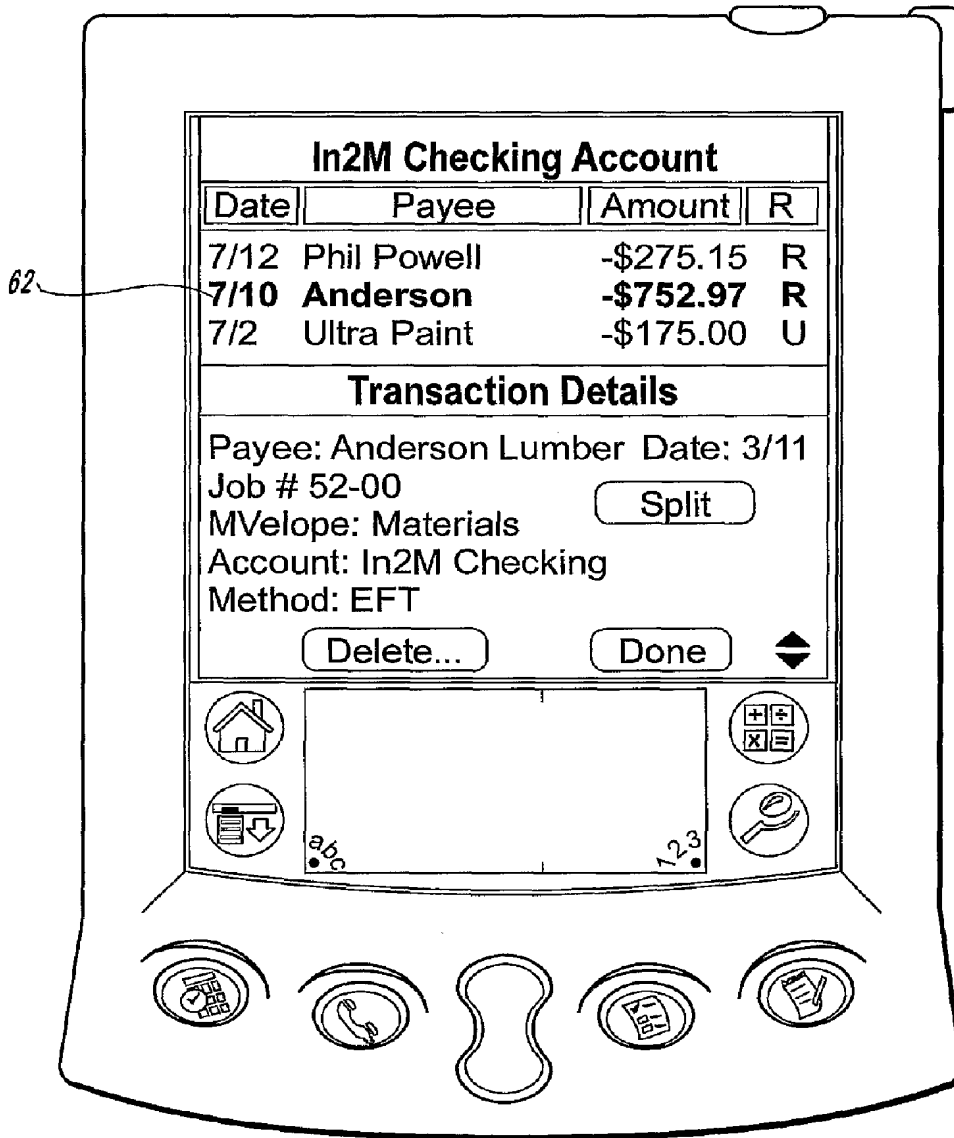


Fig. 5i

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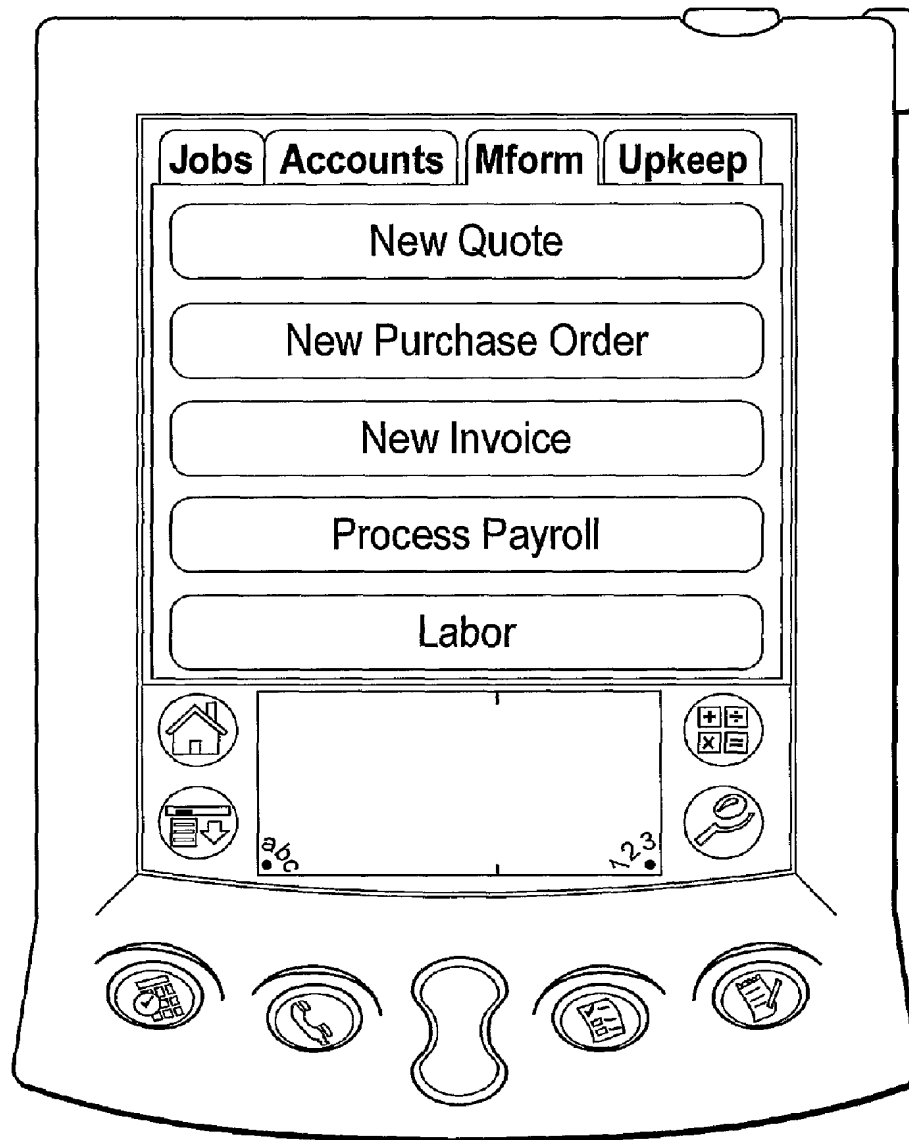


Fig. 5j

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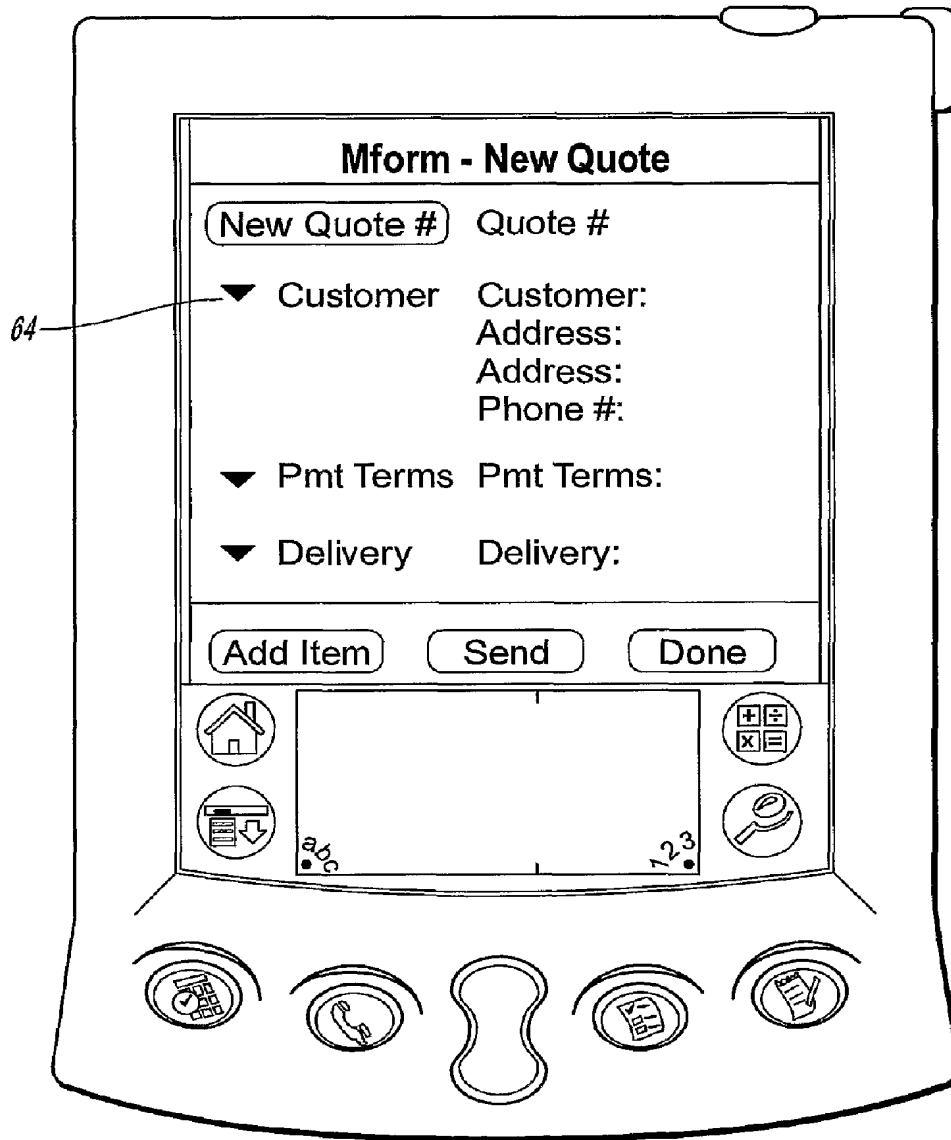


Fig. 5k

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**Mform - New Purchase Order**

<b>New P.O. #</b>	P.O. #
▼ Vendor	Vendor:
	Address:
	Address:
	Phone #:
▼ Pmt Terms	Pmt Terms:
▼ Date Req'd...	Date required:
▼ Job #	Job #:
▼ Deliver to	Del. Add..
	Del. Add..

**Add Item    Send    Done**

Navigation icons: Home, Back, Forward, Search, and a central button.

Fig. 51

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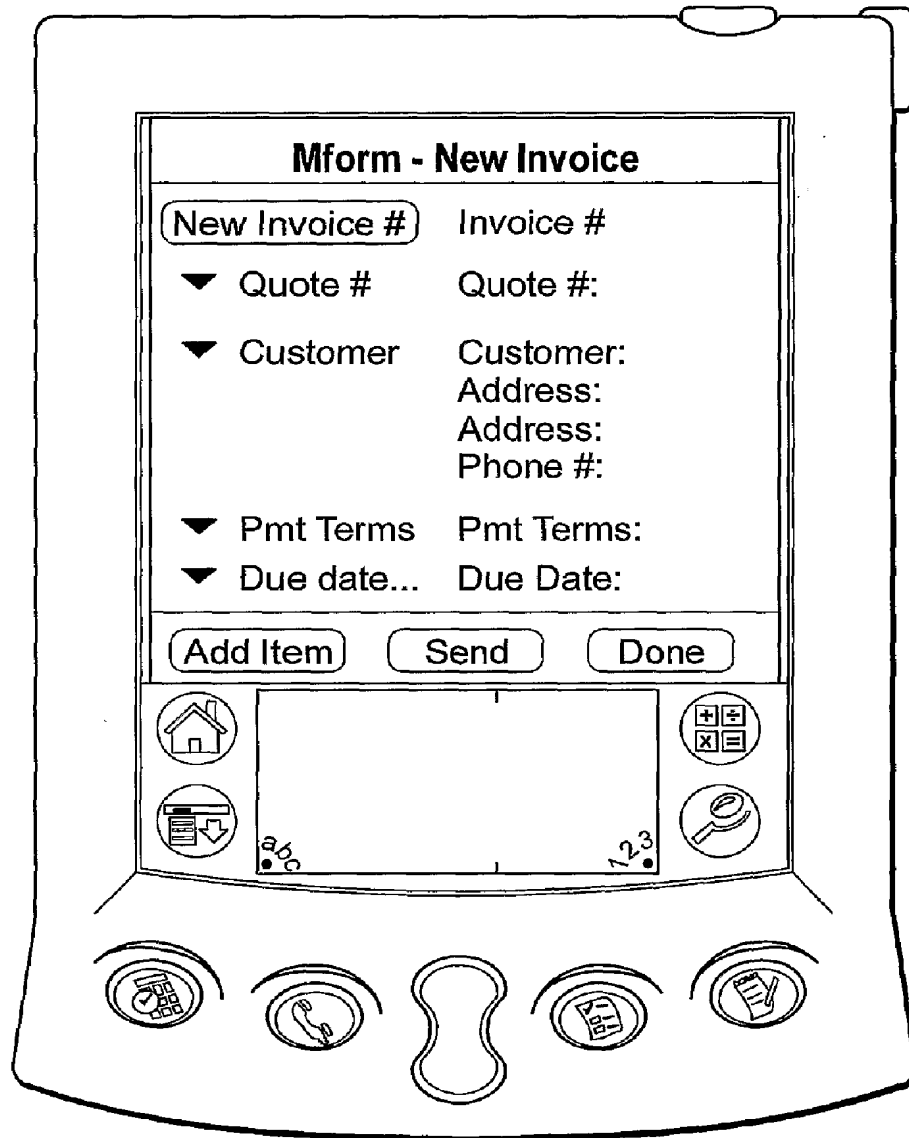


Fig. 5m



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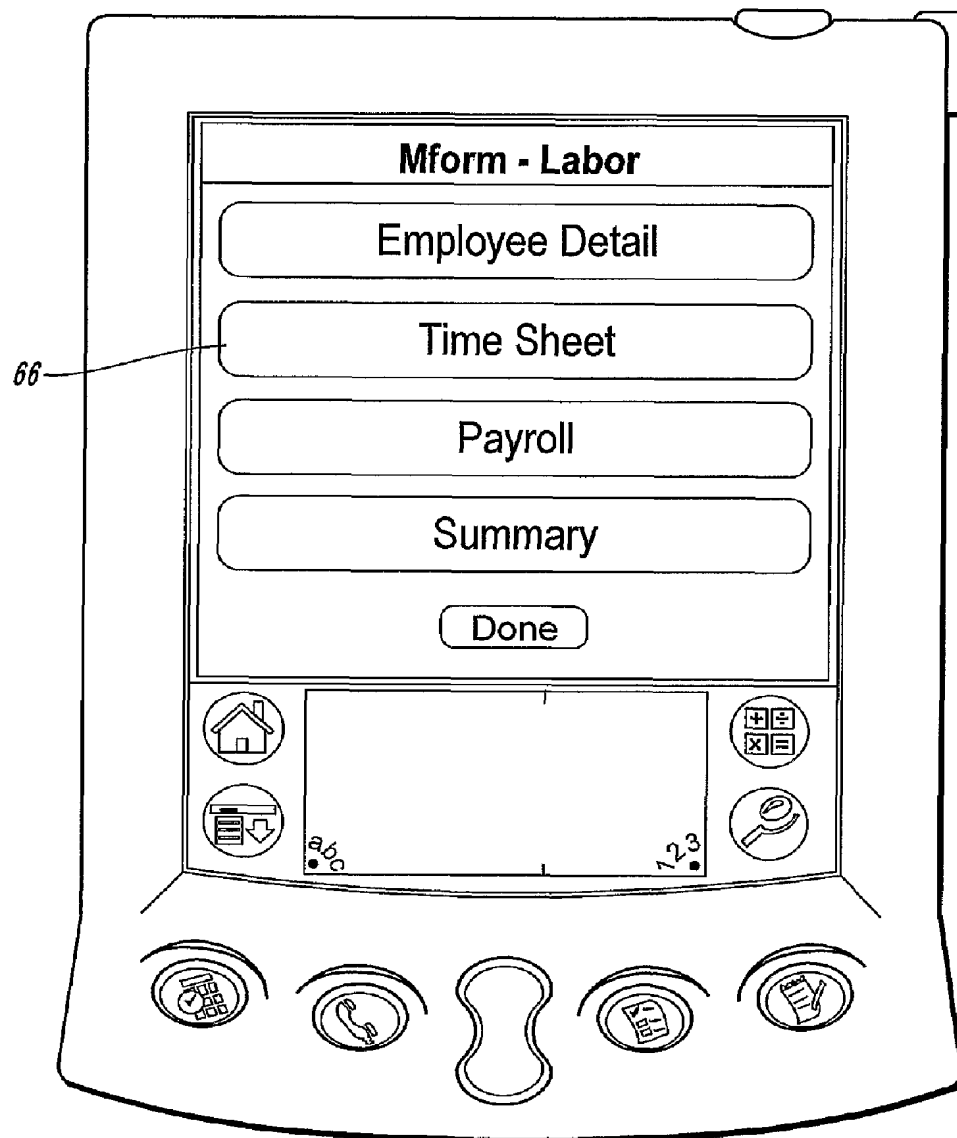


Fig. 5n

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**Mform - Time Sheet**

▼ Employee      Date  
▼ Job #  
▼ Activity  
▼ Time  
Next

1	2	3
4	5	6
7	8	9
	0	

Date	Employee	Job #	Time
6/14	Erik Brown	52-00	4.5
6/14	Erik Brown	52-00	5.5
6/15	Bob Smith	12-00	10.0
6/15	Phil Powell	12-00	10.0

Summary    Send    Done    ◆

Home    Exit    Search

abc    123

Fig. 50

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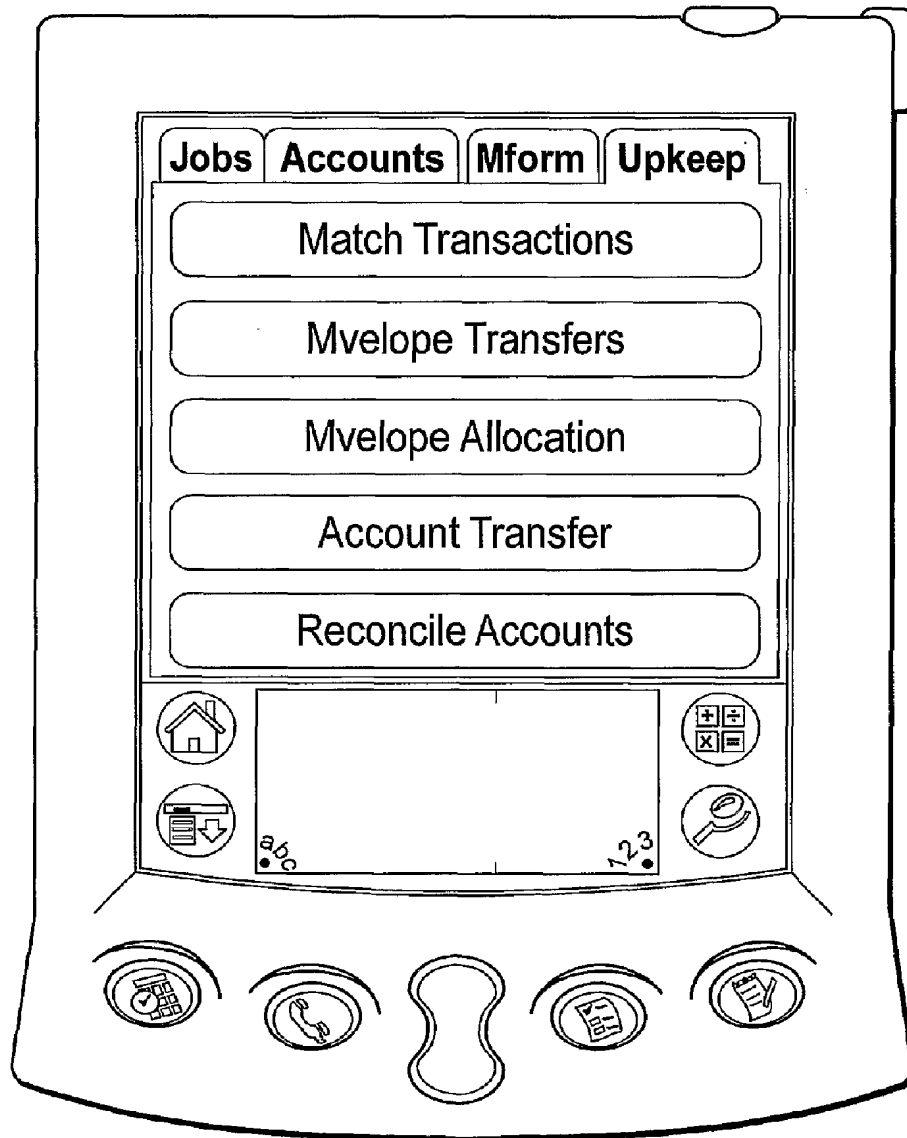


Fig. 5p

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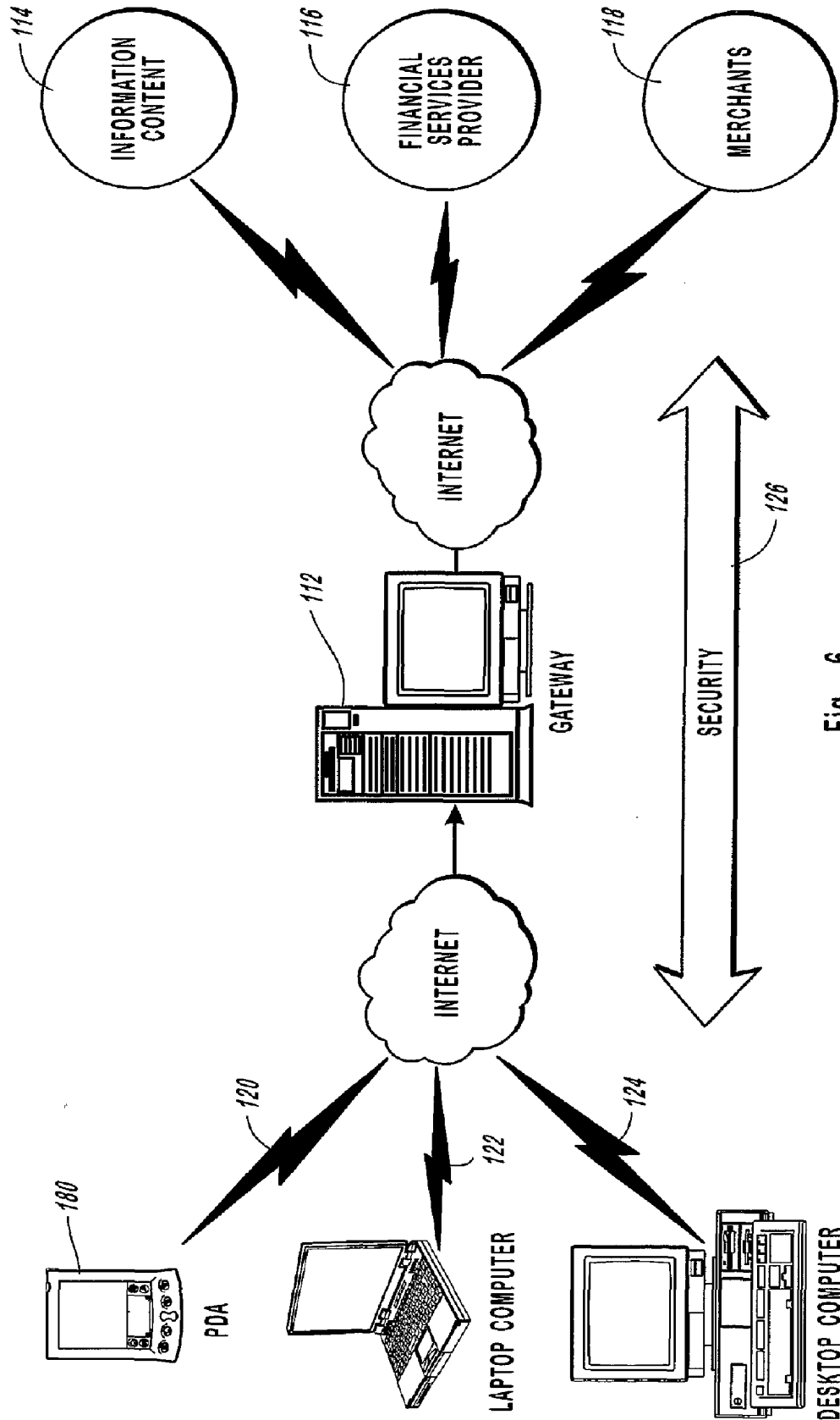


Fig. 6

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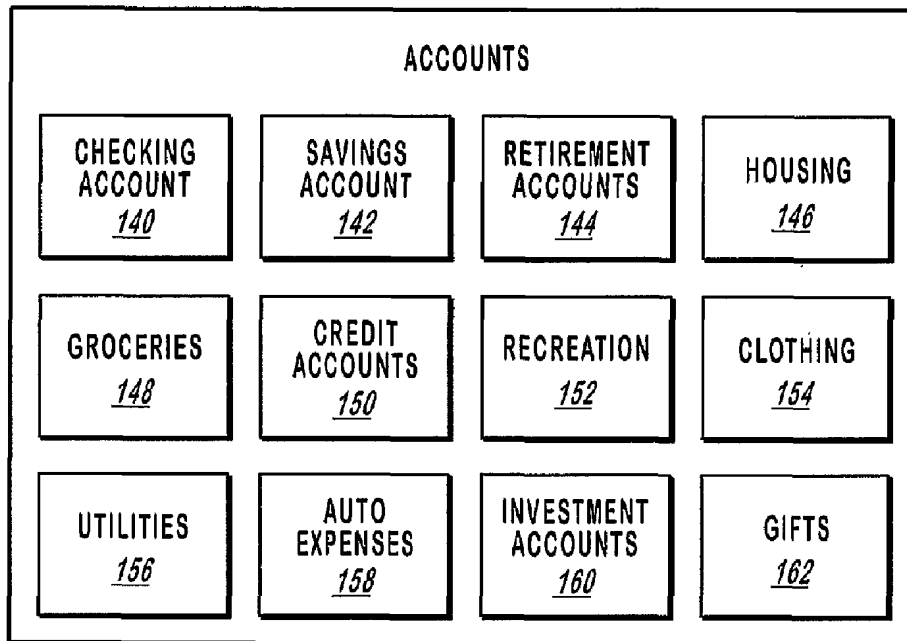


Fig. 7

GROCERIES: PERIOD: MARCH, 2000

VARIABLE: FIXED:

AMOUNT SPENT: \$XXX.XX

AMOUNT ALLOCATED: \$YYY.YY

REQUIRED: DISCRETIONARY:

SUB ACCOUNTS:

FOOD: \$357.88

EATING OUT: \$75.00

NON-FOOD ITEMS: \$100.00

MILK DELIVERY: \$50.00

BUTCHER DELIVERY: \$75.00

PAYMENTS REGISTERED:

JONES' GROCERY: \$NNN.NN DATE: 3/25/00

BROWN'S CATERING: \$MMM.MM DATE: 3/30/00

148

Fig. 8

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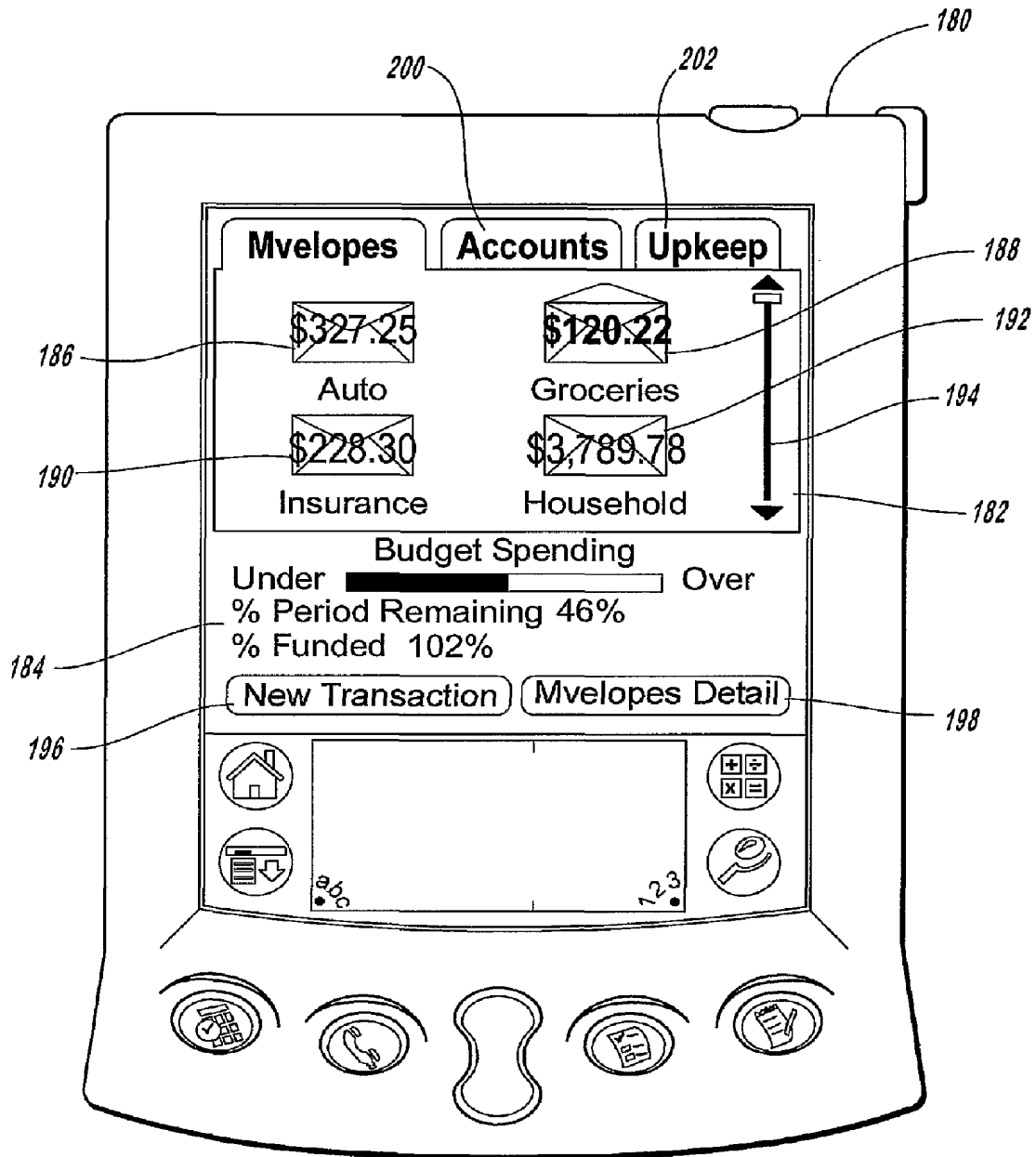


Fig. 9A

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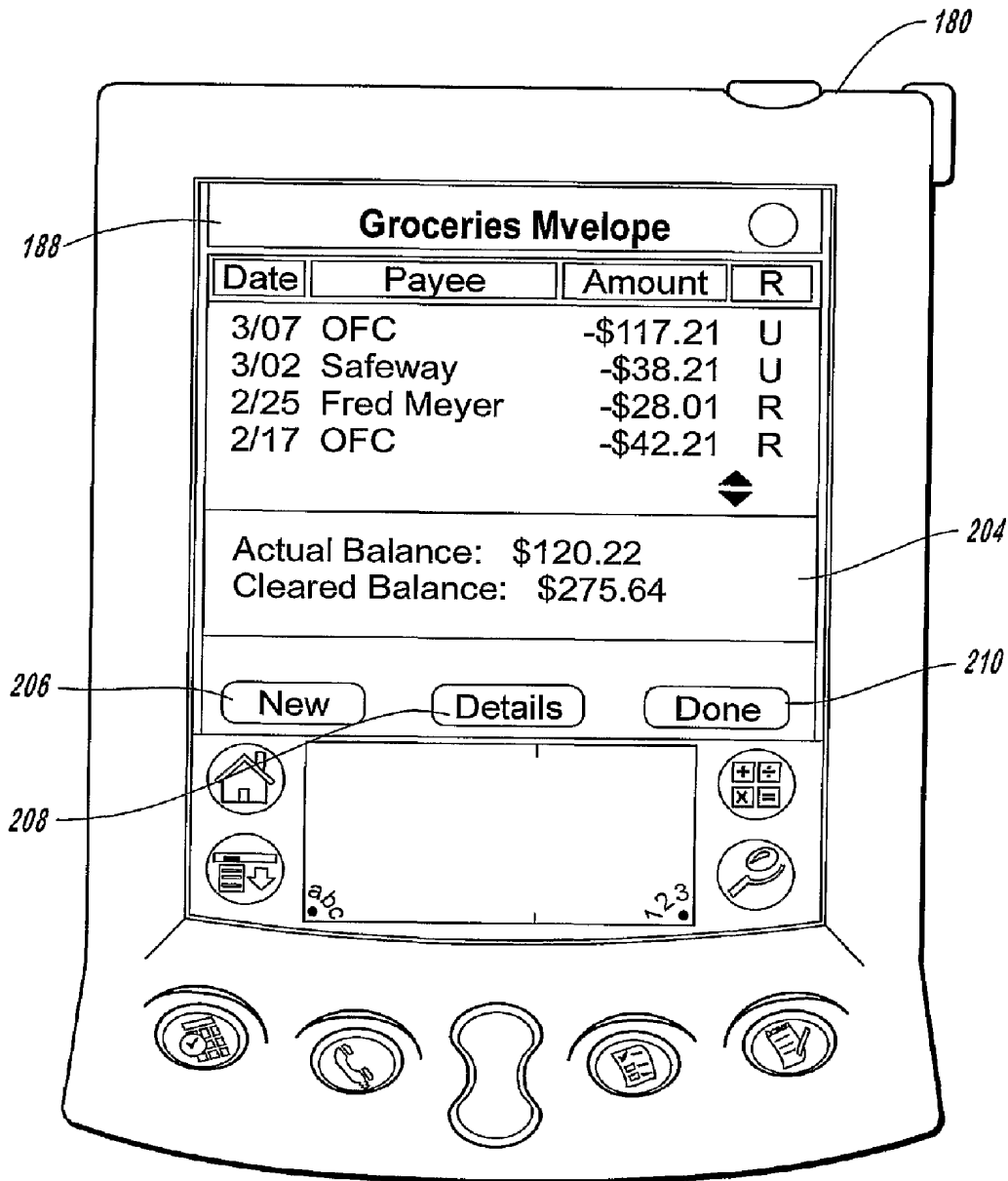
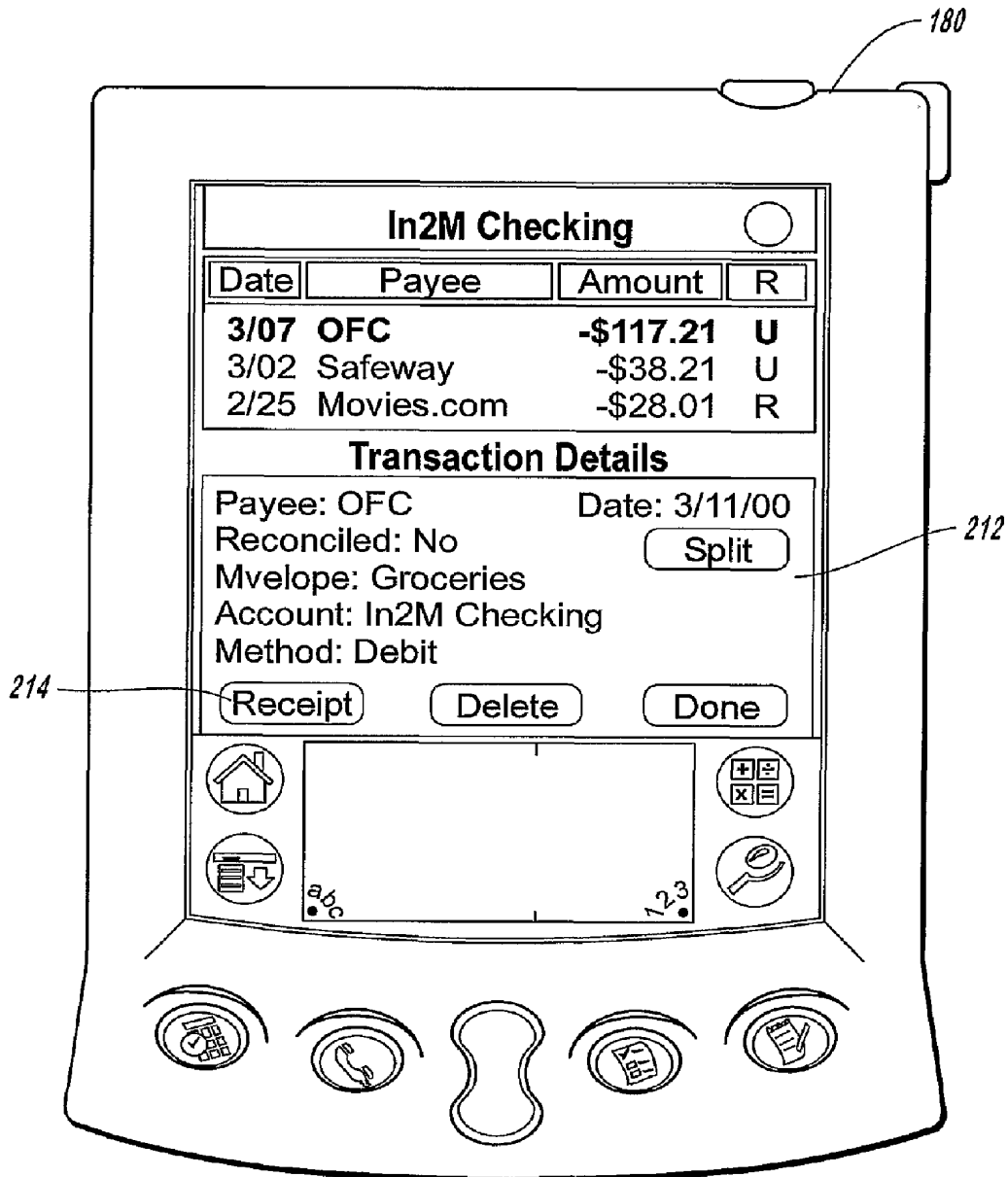


Fig. 9B

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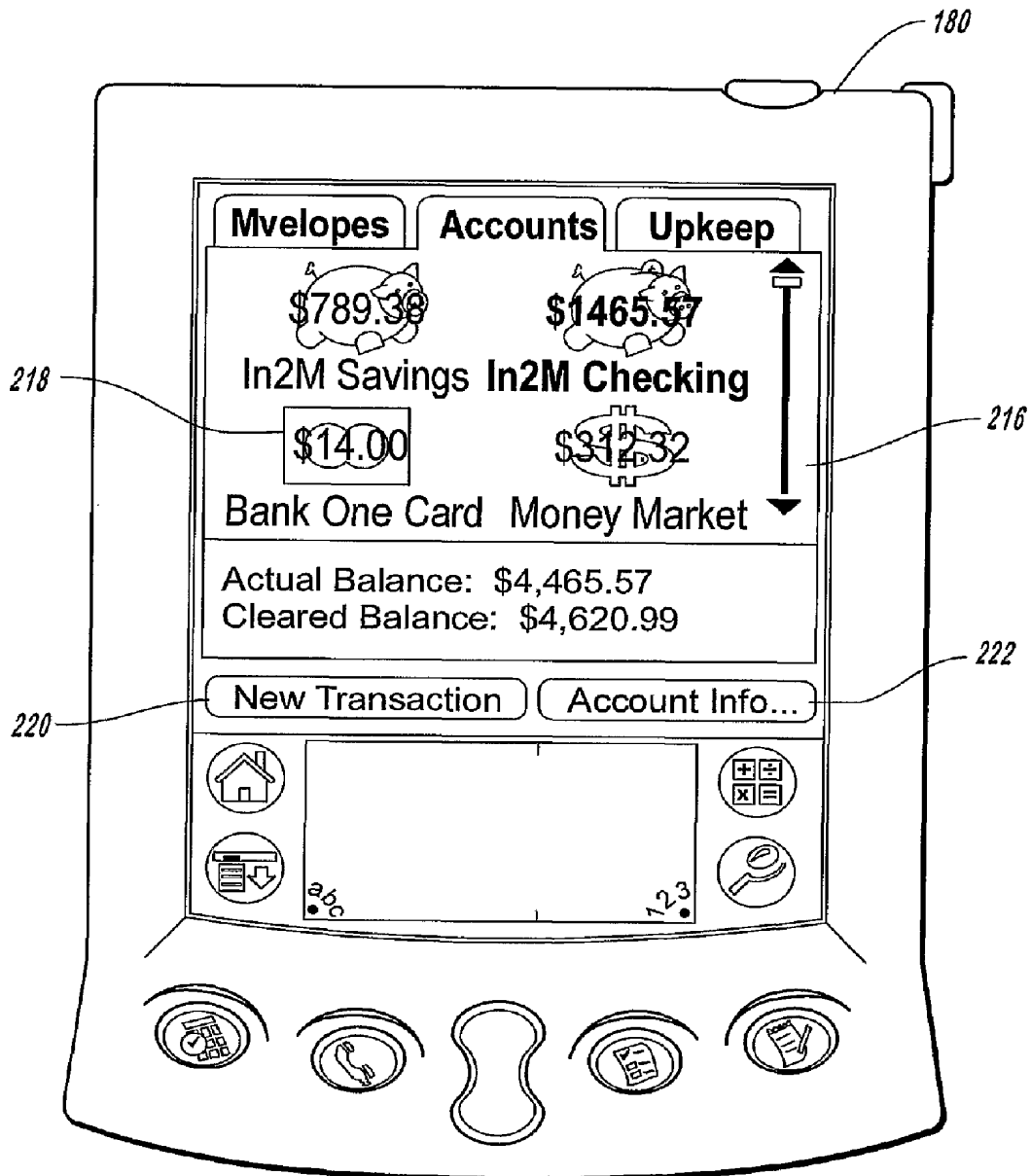


Fig. 9D

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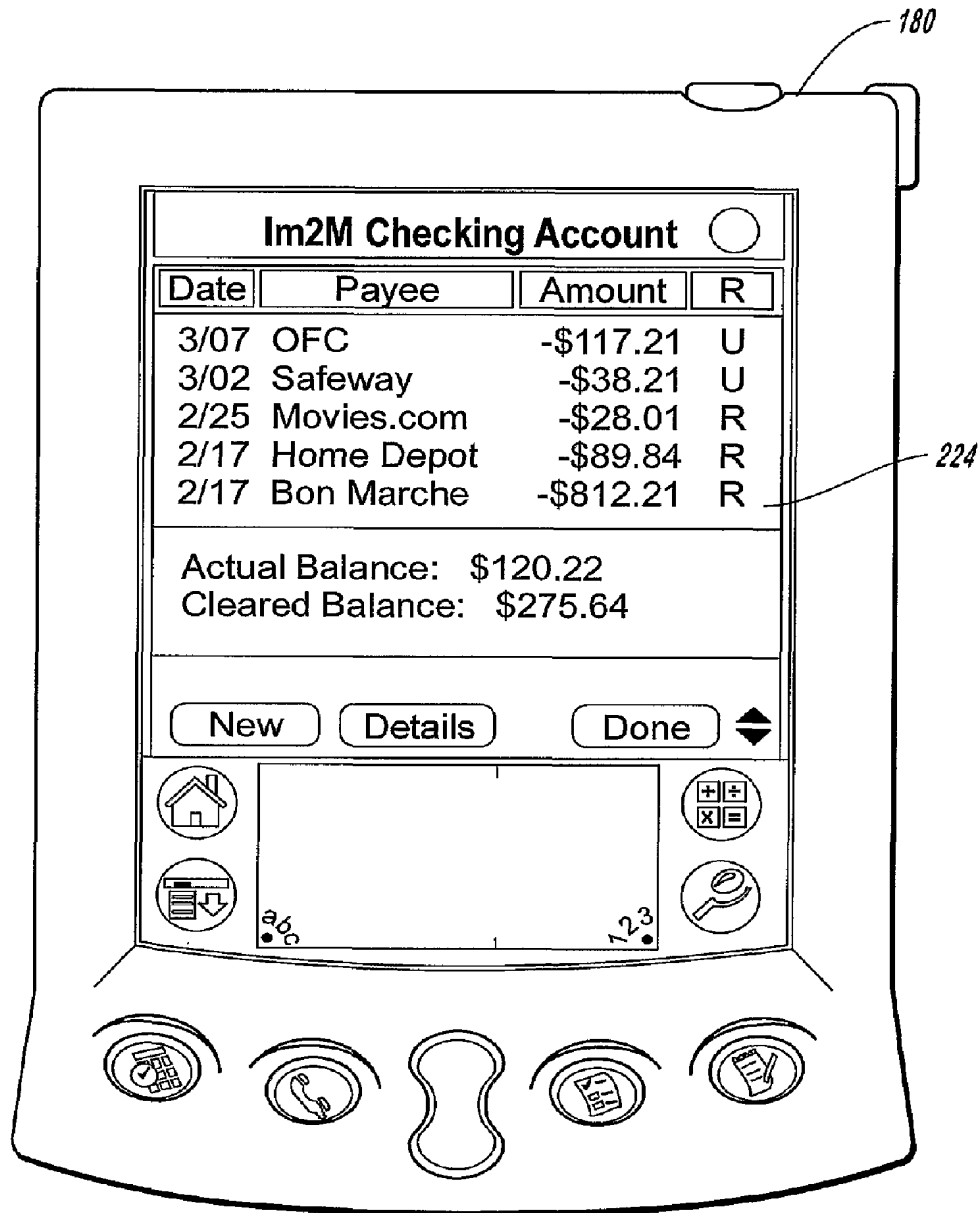


Fig. 9E

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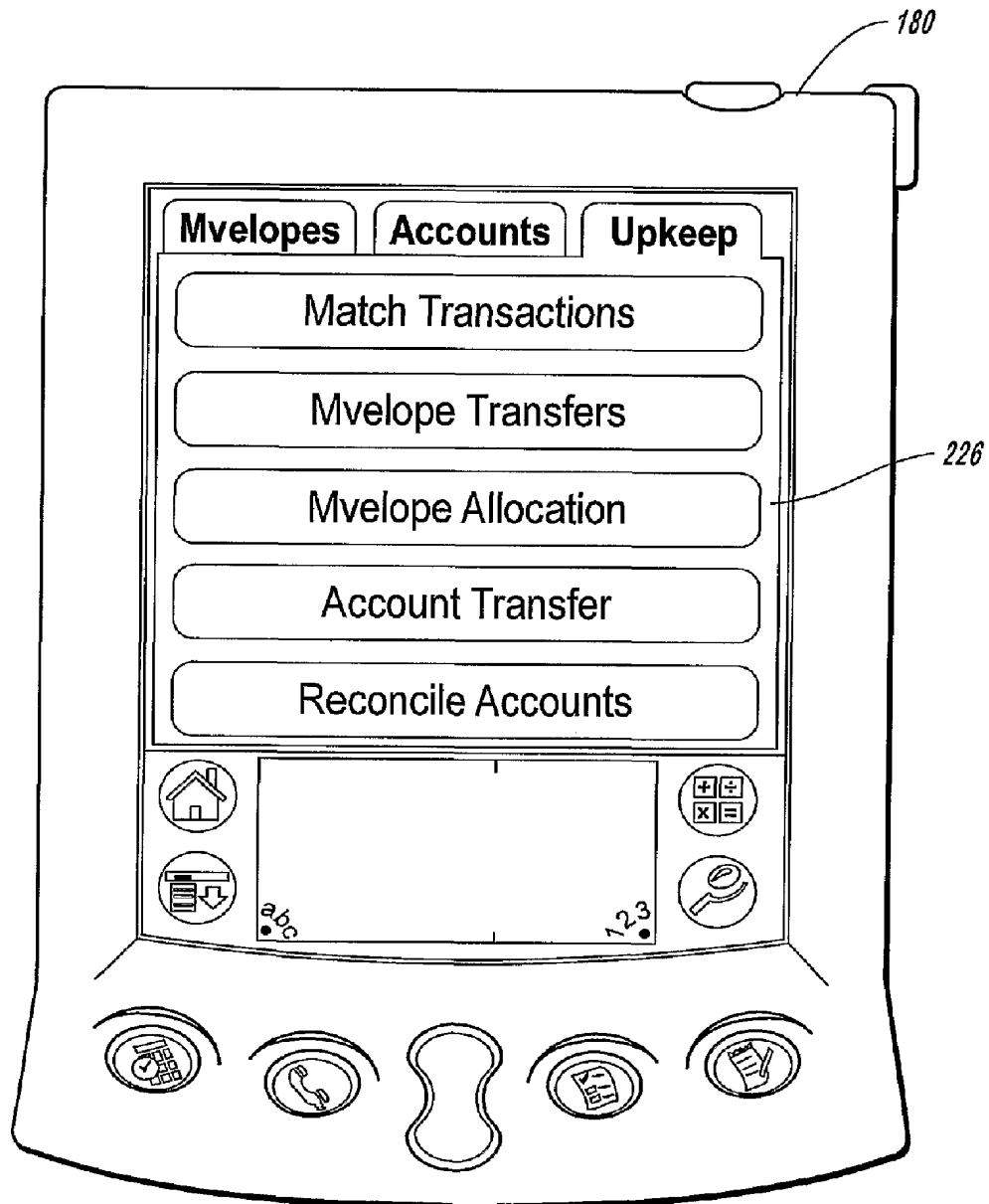


Fig. 9F